INDEX TO VOL. 203

NAMES

A

Aalborg Vaerft A/S, Ferry Boat "Gripen" (Plate 13, 4.1.57)
A.B. Svenska Fläktfabriken, High-Pressure Axial-Flow Fan, 230 ; Automatic Air Filter, 386
Abbott, R. A. S., Traction-Engine Railway Locomotives, 165, 205
Abelson and Co. (Engineers) Ltd., Self-Erecting Climbing Crane, 225
Accles and Pollock, Ltd., Hydroplane "Bluebird", (Plate 12, 11.1.57)
Acheson Colloids Ltd., Gear Failures of Ball, Tube and Rod Mills, 522
Adams-Hydraulics Ltd., Holland America Liner "Statendam", 886
Adamson, Daniel, and Co., Ltd., Dounreay Atomic Energy Establishment, 747, 784, 823
Advisory Council on Scientific Policy, Future Accessions, 90
A.E.C. Ltd., "Monocontrol" and "Automonocontrol" Transmission, 106
A.E.I.—John Thompson Nuclear Energy Co., Ltd., Berkeley Nuclear Power Station, 5, 650, 991
Aerex Ltd., Three-Stage Axial Flow Fan, 140
Aero Research Ltd., Advances in Aircraft Bonding, 564 ; Missile Construction, (901)
Aerojet-General Nucleonics, "AGN-201" 100-Milliwatt Minimum-Critical-Mass Reactor, 889
Aeronautical and General Instrument Company Ltd., Teaching Device for Royal Navy, 413
Aertssen, G., Further Sea Trials on the Lubumbashi, 602
Airmec Ltd., Electronic Speed Controller, 766
Airways Corporations, Industrial Investment, 733
Ajax Engineering Corporation, Five-Ton Mains-Frequency Coreless Induction Furnace, 490
Ajax Marine Engines Ltd., Albion "Albacore", Albion "Albatross", Leyland "Amazon", Leyland "Atalanta", Ajax "Argosy", Marine Engines, 102
Aktiebolaget Volvo, Producer Gas Plant for Cars and Tractors, 386
Albright and Wilson Ltd., Electrical Machinery in a Phosphorus Factory, 492
Alco Products Incorporated, Power Reactor, (Plate 15, 4.1.57) ; Commercial Agreement for Pressurised-Water Power Plants, 161
Alcock, W. J., 110 M.P.H. on Western Region, 722
Aldrich, Winthrop, Exhibition of Aerial Photography, 43
Aldridge, J. D., Atomisation of Water by Spinning Discs, 514
Alfa-Laval Co., Ltd., Diesel-Electric Paddle Tugs for the Navy, 486
Allan, J. F., National Physical Laboratory New Ship Hydrodynamics Laboratory, 557 ; Obituary, 935
Allegheny Ludlum Steel Corporation, Twenty-High Cluster Mill for Rolling Ultra-Thin Strip, 351
Allen Erection and Engineering Company Ltd., Synthetic Rubber Plant, 222
Allen, F. H., The Thames Estuary Investigations, 859, 895
Allen, W. H., Sons and Co., Ltd., Motor Vessel "Essex Ferry", 171
Alley and MacLellan (Polmadie) Ltd., Tunnel Under the Thames between Dartford and Purfleet, 531
Allgemeine Elektricitats-Gesellschaft, Large Mobile Transformer, 622 ; Synchronous Generators; Watertight Bulkhead Bushing; Rotary Vane Ruddergear ; Electro-pneumatic Controller, 812
Allibone, T. E., Impact of Nuclear Energy on the Twentieth Century, 984
Allis-Chalmers, Experimental Boiling Water Reactor at the Argonne National Laboratory, 661
Aluminium Company of America, Progress of the Tennessee Valley Authority, 505
Aluminium Company of Canada Ltd., S.S. "Sunrip", 307
Aluminium Company of South Africa (Pty.) Ltd., Aluminium Grandstand Roof, 579
Aluminium Laboratories Ltd., Aluminium Alloy Fishing Boat, 345
Aluminium-Walzwerke Singen G.m.b.H., 8000-Ton Extrusion Press, 851
Alvarez, Luis W., Discovery of New Nuclear Reaction at Berkeley, 274
Alvis Ltd., Helicopter Engine Testing, 264
A.M.F. Atomics Inc., 15MW Nuclear Power Station for West Germany, 575 ; German Nuclear Power, 773
Amalgamated Engineering Union, Wage Claims, 111 ; Industrial Disputes, 308 ; Briggs Dispute, 346 ; Engineering and Shipbuilding Wages, 399, 733, 770 ; Comment on Strikes, 695 ; Engineering Wages, 705
American Gas and Electric Company, Aluminium Production in the Ohio River Valley, 427
American Machine and Foundry Company, Swimming Pool Reactor, 889
American Telephone and Telegraph Company, Transatlantic Telephone Cable, 135, 159, 176
Anderson, Sir Colin, British Employers' Confederation, 420
Anderson, Sir Donald, Presidential Address, 23 ; Institute of Marine Engineers' Annual Dinner, 395
Anderson, J. K., The Forth Road Bridge Scheme, 257
Andrew Machine Construction Company Ltd., Dounreay Atomic Energy Establishment, 747, 784, 823
Anglo-Portuguese Telephone Company, Radio-Telephone Link for Portugal, 149
Angus, George, and Co., Ltd., Heat and Abrasion Resistant Protective Gloves, (930) ; Oil and Heat Resisting Leather, (968)
Apex Construction Ltd., Tablet Press, 994
Applied Research Laboratories, "Quantometer", (Plate 7, 11.1.57)
Arbeitskreis Amphibischer Verkehr, Transport of Bulk Goods, 811
Ardrossan Trawling Company Ltd., Trawlers "Kelso Paton", and "Duff Paton", 94
Argonne National Laboratory, Experimental Boiling Water Reactor, 623, 661, 699, 1,000
Armand, Louis, The Euratom Report, 772
Armour Research Foundation, Nitrided Chromium, 137, European Office, 272
Armstrong, E. B., Scientific Investigation of the Upper Atmosphere, 342
Armstrong Siddeley Motors Ltd., "Sapphire" Engines, (Plate 6, 4.1.57) ; "Preselectric" Transmission, 106
Armstrong Whitworth, Sir W. G., Aircraft Ltd., Air Cargo-Liner, 228
Arpal (Engineers) Ltd., Oil-Hydraulic Multi-Purpose Press, 885
Arrol, Sir William, and Co., Ltd., Castle Donington Power Station, (Plate 2, 4.1.57); Dry Dock at Wallsend, 801
Asea Electric Ltd., Electrical Engineers Exhibition, 534
Ashbridge, Sir Noel, I.E.E. Honorary Membership, 83
Ashby, Sir Eric, Technological Humanism, 868
Ashdowns Ltd., Reinforced Plastics Factory, 841
Ashmore Benson Pease and Co., Extensions to a Stockton Works, 880
Asquith, William, Ltd., Heavy-Duty Planing Machine, 577
Associated Drilling Supply Company (Overseas) Ltd., Proposal for a Cement Works in Qatar, (452)
Associated Electrical Industries Ltd., Electrical and Allied Plant, 335 ; Dounreay Atomic Energy Establishment, 747, 784, 823
Associated Equipment Company Ltd., Diesel Railcars for Northern Ireland, 882
Associated Society of Locomotive Engineers and Firemen, Wage Claims, 111
Associated Steels and Tools Company Ltd., Cam-Operated Vice, 845
Association des Ouvriers en Instruments de Precision, Transistor Metez, 924
Astor Boisselier and Lawrence Ltd., Uniform Sheet Wax, 882
Ateliers et Chantiers de France, Large Oil Tanker "George F. Getty", 545 ; Nuclear Marine Propulsion, 660
Ateliers de Constructions Electriques de Charleroi, Van de Graaff Accelerator for Liege University, 152 ; Flame-proof Transformer for Coal Mines, 192
Ateliers de Secheron, Large Synchronous Condenser, 926
Atkins, W. F., Precision Comparator for Small Cylindrical Work, 716
Atkins, W. S., and Partners, Berkeley Power Station, 650
Atkinson, R., Design and Operating Experience of an Ore Carrier Built Abroad, (664)
Atlantic Shipbuilding Company Ltd., Aluminium Footbridge, 261
Atlas Copco (Great Britain) Ltd., Rotary Drill, 656
Atomelektra A.G., Industrial Undertakings, 33
Atomic Energy Research Establishment, Gamma Radiation Laboratory for Lubricants, 877
Atomics International, Sodium Reactor Experiment, 928; Sodium Reactor Experiment Begins Operation, 967
Atomkraft A.G., Industrial Undertakings, 33
Aug. Klönne, Spherical Gasholder, 73 ; New Building, 812
August Thyssen-Hutte, New Building, 697, 812
Austin Motor Co., Ltd., Gas Turbines in 1956, 26 ; Repetitive Inflation of Tubeless Tyres, 539
Austin and Pickersgill Ltd., Shipbuilding and Marine Engineering in 1956, 23
Austral Standard Cables Pty., Ltd., The Australian Copper Industry, 658
Australian Department of Supply, Indirect-Fired Gas Turbines, 210
Australian Iron and Steel Ltd., Development and Growth of the Australian Steel Industry, 501 ; The Australian Copper Industry, 658
Australian Steamships Proprietary Ltd., Cargo Ship "Burwah", (Plate 10, 4.1.57)
Automatic Telephone and Electric Company Ltd., Radio-Telephone Link for Portugal, 149
Automation Ltd., Screw Slotting Machine, 882
Avery, W. and T., Ltd., Testing Machines of Unit Construction, 147
Aviation Development Ltd., Aluminium Alloy Fishing Boat, 345
A.V.R.e.V., Dusseldorf, German Nuclear Power, 773
Aylen, I. G., Education and Training of Naval Architects and Marine Engineers, 253
Ayling, P. W., Some Observations on Local Vibration, 60 ; Ship Vibration (664)

B

Babcock and Wilcox Company, American Research Reactor for Brazil, 507 ; Experimental Boiling Water Reactor at the Argonne National Laboratory, 623 ; Reactor Contract for Nuclear-Powered Merchant Ship, 891 ; Nuclear Power Station, 1002
Babcock and Wilcox Ltd., Heat Transfer Laboratory ; Steam-Raising Towers, (Plate 3, 11.1.57) ; Steam Boiler, 9
Babtie, Shaw and Morton, Shira Dam, 46
Baillieu, Lord, Industry and Taxation, 959
Baird Associates Incorporated, Apparatus for Wavelength Determination, 115
Bakelite Ltd., High-Temperature Laminating Resin, 689
Baker, Alan, Prospects of the Motor-Cycle, 497
Baker, A. L. L., Comparison of Continental, Russian and British Engineering Education, 203, 242 ; Building Frame and the Steel Shortage, 286
Baldwin Company, American 4-4-0 Locomotives, 366
Baldwin Instrument Company Ltd., Continuous Gauging of Hot-Rolled Steel Strip, 573
Baldwin-Lima-Hamilton Corporation, Forging Press and Extrusion Press, (Plate 16, 11.1.57) ; Hydraulic Press for Shaping Radioactive Materials, 777
Balfour Beatty and Co., Ltd., Turbine-House, 143 ; Berkeley Power Station, 650
Ballard, F. J., and Co., Ltd., Conveyor Oven, 107
Bamford, J. C., (Excavators) Ltd., "J.C.B." Ditch Cleaning Machine, 763
Barclay, Curle and Co., Ltd., Troopship "Nevasa", 23 ; Cargo Liner, "City of Colombo", 60 ; Troopship "Nevasa", 94
Bardahl Products Ltd., Mechanical Efficiency, 540
Barford (Agricultural) Ltd., "Lincol" Ditch Cleaning Machine, 763
Barker, H. P., Top Management Planning and Control, 733
Barnacle, H. E., Flow of Suspensions of Non-Cohesive Spherical Particles in Pipes, 898, 939
Barrett, C. S., Low-Temperature Brittleness, 647
Barrow, Henry, Radial Temperature Distribution in an Annular Coolant Passage, 713
Barwell, F. T., Slightly Oiled, 159
Bates, D. R., Scientific Investigation of the Upper Atmosphere, 342
Bates, J. G., Ditch Cleaning Machines, 763
Bath Iron Works Corporation, Three Ships of the "Forrest Sherman" Class, 65
Battelle Memorial Institute, Nuclear Research Centre, 889
Bauersfeld, Walther, Award of the James Watt International Medal, 121, 232 ; Projection Planetarium and Shell Construction, 755, 796
Bayerischer Rundfunk, 16mm. Television Recording Equipment, "BD679", 108
Beale, R. J., Gas Cooling in Power-Producing Nuclear Reactors, 974
Beans Industries Ltd., Large Mechanised Foundry and New Machine Shop, 343
Beaver, Sir Hugh, Institute of Refrigeration, 20
Becker and van Huliien, Oil-Hydraulic Multi-Purpose Press, 885
Beckermet Mining Company Ltd., Iron and Steel Works at Workington, 804
Bedford, T., and Partners, Internal Combustion Research Centre, 761
Beer, Stafford, Scope for Operational Research in Industry, 434, 479
Belfast Steamship Company, Motor Vessels "Ulster Prince", "Ulster Monarch", and "Ulster Queen", 403
Bell Aircraft Corporation, Supersonic Aircraft "Bell X-2" (Plate 16, 4.1.57)
Bell Telephone Laboratories, Submerged Repeaters, 55 ; Transatlantic Telephone Cable, 135, 176 ; Twenty-High Cluster Mill for Rolling Ultra-Thin Strip, 351 ; Solid-State Oscillator for Microwave Frequencies, 389 ; Magnetic Alloy of High Permeability and Low Hysteresis Loss, 427 ; Enrico Fermi Professorship at the University of Chicago, 815
Bellis and Morcom Ltd., High Pressure Air Drying Equipment, 70
B.E.N. Patents Ltd., Tractor Mounted Air Compressor, (38)
Benson, R. S., Discharge from an Engine Cylinder to Atmosphere, 946, 976
Bergins Company Ltd., Kelvin Diesel P2 Engine, 102
Berkeley Coachwork Ltd., "Berkeley" Sports Car, (Plate 3, 4.1.57)
Berners-Lee, C. M., Machine Loading—An Industrial Application of Computers, 169, 446
Bertrams Ltd., Cellulose Wadding Mill at Aylesford, 875
Bethlehem Steel Company, Nuclear-Powered Guided Missile, 65 ; 100,000-ton Tanker, 349 ; Eddystone Steam Power Station, 774
Beyer, Peacock and Co., Ltd., Steam Locomotives for South African Railways, 271 ; Beyer-Garratt Locomotives for Rhodesia Railways, 669
Beynon, W. J. G., Scientific Investigation of the Upper Atmosphere, 342
B.H.P. Collieries Pty., Ltd., The Development and Growth of the Australian Steel Industry, 501
Birfield Industries Ltd., Birmingham Factory Extension, 859
Birks, F. M., Dr. Glasgow's Contributions to the Gas Industry, 370
Birlec Ltd., High Pressure Air Drying Equipment, 70 ; Sealed Quench Furnace, 107 ; Line Production of Die Castings, 453 ; Five-Ton Mains-Frequency Coreless Induction Furnace, 490 ; "Ajaxomatic" Holding Furnace, 684
Birmingham Carriage and Wagon Company Ltd., Prototype Passenger Coaches for British Railways, 228
Birmingham Exchange and Engineering Centre, Continental Trade Fairs, 229
Birstall, Professor, Refractory Nozzle Blades for High-Temperature Gas Turbines, 251
Birtley Company Ltd., Tromp Washery, 140
Bituminous Coal Research Incorporated, Indirect-Fired Gas Turbines, 210
Blackburn and General Aircraft Ltd., Advanced Aeronautical Education, 488
Black-Clawson International Ltd., Cellulose Wadding Mill at Aylesford, 875
Blackman, Keith, Ltd., P.V.C. Fume Removal Fans, (105) ; Hot Fume Extraction Fan with Bifurcated Housing, 107 ; Industrial Wet Washer, 684
Blackman, Raymond V. B., Naval Construction in 1956, 29, 65, 92
Blackstone and Co., Ltd., Construction of the Chainat Barrage in Thailand, 448
Blackwell, R. E., Model Experiments on a Series of 0.70 Block Coefficient Forms, 602
Blaenavon Iron Company, Centenary of Crumlin Viaduct, 873
Blakeley, T. H., Refractory Nozzle Blades for High-Temperature Gas Turbines, 251
Blomgren, Walter E., International Congress on Irrigation, 37
Blythswood Shipbuilding Company Ltd., Oil Tanker "Atlantic Knight", 94
Board of Trade, Anglo-Polish Trade Agreement, 32 ; Overseas Trade, 32, 111, 150, 270, 500, 620, 695, 810, 848, 959, 996 ; Basic Materials Prices, 111 ; Loan Facilities for Small Manufacturers, 150 ; Iron and Steel Exports, (196) ; Lead Disposals, (196) ; Export Trade Monthly Figures, 229 ; Overseas Trade ; Dollar Exports, 346 ; Anglo-German Trade, 420 ; Trade with South Africa, 500 ; Atomic Energy Exhibition for Australia, 513 ; Britain's Machinery Exports, 542 ; British Electrical Exports, 553 ; Agricultural Machinery Exports, 620 ; Employment and Defence Production, 657 ; Exports of the Motor Industry, 695 ; Patent Applications, (702) ; German Industries Fair, Hanover, 734 ; Overseas Trade by Air, 916
Boebringer, Gebr., G.m.b.H., Gear Deburring Machine, 386
Boeing Airplane Company, Jet Stratoliner, 26 ; Boeing "707" "Jet Stratoliner" ; KC-97 "Stratofreighter"; KC-135 "Stratotanker", 53; Ramjets, (78)
Bolenz und Schafer, Oil-Gas Accumulators, 812
Bolton, Hennessey and Partners, Structural System, 44
Bomford and Evershed Ltd., "Sapper" Ditch Cleaning Machine, 763
Bonny, A. D., Modern Marine Steam-Turbine Feed Systems, (418)
Boomsma, M., Strength Calculations of Bolted Joints, 674
Booth, James, and Co., Ltd., High-Speed Drawbench, (Plate 4, 4.1.57) ; Controlled Stretched Plates, (252) ; Ultrasonic Flaw Detection Equipment for Large Plates, 692
Borgquist, Carl, Award of the Faraday Medal, 83
Bostock and Bramley Ltd., Wartime Excavating Machine, 396
Boventer, H., Thyssenstahl and Siegener Buildings, 812
Bowman, James, Manpower and Wages, 62

Figures in Brackets ( ) refer to paragraphs

Boyd, G. M., Conditions for Unstable Rupturing of a Wide Plate, 644
Boyd, R. L. F., Scientific Investigation of the Upper Atmosphere, 342
Boyd, T. Boyd, Institute of Export, 810
B.P. Benzin and Petroleum A.G., Liquid Petroleum Gas Plant in Austria, 544
B.P. (Canada) Ltd., Canadian Oil Refinery, (445)
B.P. Exploration Company Ltd., Natural Gas in Yorkshire, (185)
B.P. Refinery (Kwinana) Ltd., The Development and Growth of the Australian Steel Industry, 501
Brackett, F. W., and Co., Ltd., Dounreay Atomic Energy Establishment, 747, 784, 823
Bradford, Dr., Science Museum Library, 90
Bradley, P. W., Further Notes on the Development of Fairground Machinery, 437
Brand, Charles, Ltd., Progress of Potters Bar Railway Tunnel, 612
Bray, Arthur, Ltd., Engines at the National Boat Show, 102
Brechenmacher, W. and Dr. K., Infra-Red Dryer, 622
Breguet, Societe Anonyme Des Ateliers D'Aviation Louis, 765 "Deux Ponts" Transporter Aircraft, 884
Brenner, Victor, Birmingham Engineering Centre, 695
Bridge, I. C., Paddle Wheels, (428)
Bridges, F. W., and Sons, Ltd., Engineering, Marine, Welding and Nuclear Energy Exhibition, (156)
Briggs Motor Bodies Ltd., Automatic Welding Plant, (Plate 4, 4.1.57) ; Industrial Disputes, 308 ; Dispute, 346 ; Ford Modernisation and Expansion Scheme, 650 ; Spares Storage and Handling, 653 ; Automatic Feeding Equipment for Nut Welding Machine, 767
Brisby, M. D. J., Industrial Development in India, 917
Brissonneau et Lotz, Autorail Express Trains between Paris and Zurich, 869
Bristol Aero-Engines Ltd., Lightweight Fighter Engine, (854)
Bristol Aeroplane Co., Ltd., "Orion" Turbo-Prop Engine, (Plate 5, 4.1.57) ; "Britannia" (Plate 6, 4.1.57), 16 ; Gas Turbine "Olympus" ; "Marine Proteus" For High-Speed Patrol Boats ; "Thor" Ramjet, 26 ; Jet Airliner "Britannia" ; "Olympus" Engines, 53 ; "Britannia" Long-Range Air-liner ; Unconventional Aircraft, (78) ; 16,000 lb. Turbo-Jet, (236) ; Advanced Aeronautical Education, 488 ; "Bobbin" Test Vehicle for Ram-jets, 497 ; Aircraft Turbines, 593 ; Defensive Missiles, 634 ; Cost Stability, (770) ; Military Aircraft Development, 847
Bristol Aircraft Ltd., Advances in Aircraft Bonding, 564 ; Future of the Aircraft Industry, 821
Bristol Pneumatic Tools Ltd., Heavy-Duty Portable Compressor, (468)
British Appliances Manufacturing Company Ltd., Dounreay Atomic Energy Establishment, 747, 784, 823
British Australian Power Cables Pty., Ltd., The Australian Copper Industry, 658
British Broadcasting Corporation, 16mm Television Recording Equipment "BD579", 108 ; "Roving Eye" Television Equipment, 412 ; Electrical Engineers Exhibition, 533, 570
British Columbia Electric Company Ltd., British Columbia-Vancouver Island 138kV Submarine Power Cable, 678
British Columbia Telephone Company, British Columbia-Vancouver Island 138kV Submarine Power Cable, 678
British Columbia Toll Highways and Bridges Authority, Road Tunnel Under Lower Fraser River, Vancouver, 48
British Council, European University Interchange, 959
British Employers' Confederation, Engineering and Shipbuilding Wages, 399 ; Annual General Meeting, 420 ; Price Stability and Productivity, 883
British Heat Resisting Glass Company Ltd., Electric Glass Melting Furnace, 55
British India Steam Navigation Co., Ltd., Cargo Liner "Nyanza", Troopship "Nevasa", 23 ; Troopship "Nevasa", 94
British Insulated Callender's Cables Ltd., 138kV Cable, 9 ; 2MeV Van de Graaff Particle Accelerator, 55 ; Five-Ton Mains-Frequency Coreless Induction Furnace, 490 ; Gas Turbine Power Station, 618 ; Manufacture of Mineral Insulated Cables, 806
British Insulated Callenders Construction Company Ltd., Electrification of Southend (Victoria) Line, 68
British Jeffrey-Diamond Ltd., Swing Hammer Mill, 222 ; Hydraulic Haulage Drive for Coal-Cutting Machines, 843
British Manufactured Bearings Company Ltd., Air-Conditioned Pressurised Assembly Cabinets, 380
British National Committee, World Power Conference Sectional Meeting, (38) ; International Congress on Combustion Engines, (223)
British Nuclear Energy Conference, Broadened Basis, 83
British Oil Shipping Company Ltd., Oil Tanker "Vivien Louise", 94
British Overseas Fairs Ltd., British Trade Fair at Helsinki, 733
British Oxygen Company Ltd., Monopolies Commission Report on Industrial Gases, 72
British Oxygen Engineering Ltd., Helium Drier and Adsorber for "Dido" Research Reactor, 654
British Oxygen Gases Ltd., Oxygen-Cutting Equipment for Ship's Deck Beams, 253 ; Flame Cutting Machine for Steel Strip, (276)
British Petroleum Company Ltd., Canadian Oil Refinery, (445) ; Liquid Petroleum Gas Plant in Austria, 544 ; Oil Refinery for Turkey, (702)
British Piston Ring Company Ltd., Five-Ton Mains-Frequency Coreless Induction Furnace, 490
British Plastics, Plastics Convention, (702)
British Polar Engines Ltd., Diesel Engines for H.M.S. "Puma" ; Diesel Engines for H.M.S. "Lynx", 29
British Post Office, Transatlantic Telephone Cable, 135, 159, 176
British Productivity Council, Industry and European Free Trade, 308
British Railways, Numbering of Diesel Locomotives, (803)
British Reinforced Concrete Engineering Company Ltd., Reinforced Concrete Tower, 140
British Road Federation, Conference on Urban Motorways, 44 ; Need for New Roads, 745 ; Reconstruction of the Great North Road, (854)
British Ropes Ltd., Wire for Prestressed Concrete, (930)
British Steel Piling Co., Ltd., Construction of the Chainat Barrage in Thailand, 448
British Thomson-Houston Company Ltd., Finlarig Power Station, 46 ; Fan Drive ; Germanium Rectifier, 55 ; Reactor Tiers, 56 ; Electrification of Southend (Victoria) Line, 68 ; Gas Circulators, 143 ; 45,000-ton Liner for Australian Service, 185 ; Electrical and Allied Plant, 335 ; Diesel-Electric Paddle Tugs for the Navy, 486 ; Electric Locomotives Ordered for British Railways, 513 ; Portable Sawmill for Canada, 576 ; Mobile Workshops for Servicing Power Station Equipment, 580 ; Manufacture of Fractional Horsepower Motors, 614 ; 400kV Power Transformer, 845 ; Forced-Oil Air-Blast Transformer Cooler, 847 ; Cellulose Wadding Mill at Aylesford, 875
British Thomson-Houston Export Company, Surveys for Engineering Development in British Columbia, (493)
British Transport Commission, Ribbleton Motorway, 20 ; Transport (Railway Finances) Bill, 28 ; Railway Wages, 189, 500, 542, 581 ; Exhibition of Components Required by British Railways, 201 ; Prototype Passenger Coaches for British Railways, 228 ; Traffic Receipts, 270 ; New Offices for British Railways Central Electrical Staff, 376 ; Progress of Modernisation Plans on British Railways, 417 ; Improvement of River Trent Navigation (508) ; Electric Locomotives Ordered for British Railways, 513 ; Main Line Diesel-Electric Trains, 521 ; Travel in London, 601 ; New Publication, (664) ; Industrial Investment, 733 ; Railway Shopmen's Pay Claim, 733 ; Improvements for River Severn and Gloucester and Sharpness Canal, (807) ; Main Line Diesel Locomotive for British Railways, 859 ; 1,000 H.P. Diesel-Electric Locomotives for British Railways, 913 ; British Road Services, 916 ; Automatic Train Control, (930)
British Transport Docks, Improvements at Immingham and Barrow Docks, (664)
British Transport Waterways, Improvements for River Severn and Gloucester and Sharpness Canal, (807)
British Tufting Machinery Ltd., Fluid Bed Technique for the Textile Industry, 651
British Tyre and Rubber Company Ltd., Vee Belts, (930) ; V-Belt Drives, (993)
Broken Hill Proprietary Company Ltd., Australian Wire Weaving Industry ; Salt Production at Whyalla, South Australia, 382 ; Development and Growth of the Australian Steel Industry, 501 ; Skelp Mill at Newcastle, N.S.W., 537 ; Australian Copper Industry, 658
Bronx Engineering Company Ltd., Heavy-Duty Three-Roll Plate Bending Machine, 619 ; 60-Ton Press Brake, 684
Brook, Henry, Industrial Re-Rating, 241
Brook Motors Ltd., Portable Sawmill for Canada, 576
Brooke Marine Ltd., Trawler "Pioneer", (Plate 11, 11.1.57) ; Aluminium Alloy Fishing Boat, 345
Brookgate Industries Ltd., Cellulose Wadding Mill at Aylesford, 875
Brookhirst Switchgear Ltd., Electrical Engineers Exhibition, 535
Broom and Wade Ltd., Portable Sawmill for Canada, 576 ; Tunnel Under the Thames between Dartford and Purfleet, 531
Brotherhood, Peter Ltd., High Pressure Air Drying Equipment, 70
Brown Boveri A.G., German Nuclear Power, 773
Brown, Boveri et Cie, Air-Cooled, Steel-Enclosed Mercury Arc Rectifiers ; Control Gear ; Arithmetical Unit, 771
Brown Brothers, Water Tractor for Belgian Congo, 273
Brown, David Industries Ltd., "Delphine", Outboard Motor, 102 ; M.D.6 and Mark M.D.2 Marine Engines, 102 ; Transmission Gear Heat-Treatment Installation, 652
Brown, David, and Sons (Huddersfield) Ltd., Synchromesh Transmission, (15)
Brown, Gordon, Welding at Calder Hall, 300
Brown, John, and Co., Ltd., H.M.S. "Lynx", 29 ; Cruiser "Tiger", 65 ; Liner "Carinthia" (Plate 9, 4.1.57), 94 ; Ship Model Experimental Tank, 145 ; Motor Vessel "Essex Ferry", 171
Brown, T. W. F., Shipbuilding and Marine Engineering in 1956, 60 ; Refractory Nozzle Blades for High-Temperature Gas Turbines, 251
Bruce, A. K., Dr. William Small, 362
Bruce, G. W., Ltd., Dounreay Atomic Energy Establishment, 747, 784, 823
Bruggeling, A. S. G., Prestressed Concrete in the Netherlands, 231
Bruges, Edward A., Gas Engine Analysis, 790
Brun Ltd., Volta River Project, 20
Brush Electrical Engineering Company Ltd., Dounreay Atomic Energy Establishment, 747, 784, 823
Brush, The, Group Ltd., Brush Plant Full-Load Trials, 26
Bryce Berger, Ltd., Diesel Governor, (108)
B.S.A. Motor Cycles Ltd., Engine Endurance, (778)
B.S.A. Tools Ltd., Induction Hardening Attachment on an Automatic, 619
Budworth, David, Ltd., Small Turbines, 26
Buedeler, Werner, The International Geophysical Year, 973
Bullows, Alfred, and Sons, Ltd., Spray Booth Exhaust Fan Control Device, 110 ; British Industries Fair, 684
Bulton, Percy, Ltd., Improvement on A.5 in Staffordshire, (25)
Bundesverband der Betonsteinindustrie e.V., Congress of the Precast Concrete Industry, 812
Burns, T. F., and Partners, Dry Dock at Wallsend, 801
Burntisland Shipbuilding Co., Ltd., Cargo Ship "Burwah", Liner "Norman Prince", (Plate 10, 4.1.57) ; Cargo Liner "Capetan Cardamilitis", 61 ; Cargo Vessels "Michael G Livanos" and M.V. "Atalanti M Livanos", 94
Burrill, L. C., Education and Training of Naval Architects and Marine Engineers, 253 ; Effect of Cavitation in the Performance of a Series of 16in Model Propellers, 558
Butters Brothers and Co., Ltd., Construction of the Chainat Barrage in Thailand, 448 ; Dounreay Atomic Energy Establishment, 747, 784, 823

C

C. A. Cemento Carabobo Sucra, Gas Turbine Power Station, 618
Cable Covers Ltd., Protective Safety Slings, (374)
Cable Makers Australia Pty., Ltd., The Australian Copper Industry, 658
Cable and Wireless Ltd., Plans for Second Transatlantic Telephone Cable, 593
Caldwell, J. B., Effect of Superstructures on the Longitudinal Strength of Ships, 604
Caledon Shipbuilding and Engineering Company, Ltd., "City of Winnipeg", Cargo Liner "Diomed", 60 ; Cargo Liner "Almerian", 94
California Texas Corporation, Oil Refinery for Turkey, (702)
Calvert, N. G., The Hydraulic Ram, 597
Cambridge Instrument Company, Ltd., Damping Capacity, 671 ; Electro-Chemical Dissolved Oxygen Recorder, 766
Cammell Laird and Co., Ltd., H.M.S. "Whitby, 29
Campbell, D., Speed Records of the Year, (Plate 12, 11.1.57) ; "Proteus" Power Plant, 26 ; The Hydroplane "Bluebird", 474
Canadian Comstock Company, Ltd., Transatlantic Telephone Cable, 176
Canadian Government Department of Mines, Indirect-Fired Gas Turbines, 210
Canadian National Railways, M.V. "Bonavista", 94
Canadian National Research Council, Penetration and Diffusion of Gamma-Rays, 193
Canadian Overseas Telecommunication Corporation, Transatlantic Telephone Cable, 135, 159, 176 ; Plans for Second Transatlantic Telephone Cable, 593
Canadian Pacific Company, Salvaging of the "Empress of Canada", 128
Canadian Vickers Ltd., H.M.C.S. "St. Laurent", 65
Candee, Allan H., Terminology in Gearing, 484
Cape Building Products Ltd., Industrial Fire Control, 879
Carmichael, A. M., Ltd., Errochty Dam : Shira Dam, 46
Carr, Robert, Labour Relations, 657
Carrier-Ross Engineering Company Ltd., Cellulose Wadding Mill at Aylesford, 875
Carron Company, Marine Equipment Exhibition, (382)
Carron, W. J., Comment on Strikes, 695
Carter Bros. (Billingshurst) Ltd., "Unique" Ditch Cleaning Machine, 763
Carter, C. F., Industry and Technical Progress, 819, 867
C.A.V., Ltd., Test Beds, (Plate 6, 11.1.57) ; Electric Gear Selection, 106 ; Cold and Hot Chambers, 761
Cement Marketing Company, Ltd., Hydrophobic Cement, 204
Cementation Company Ltd., Finlarig Power Station, 46 ; Concrete Aggregates from Fly Ash, 707
Central Electricity Authority, New Power Station, (Plate 4, 11.1.57) ; Hams Hall Power Stations ; Tilbury "A" Power Station, (Plate 8, 4.1.57) ; Reconstruction of Shoreham Harbour, (Plate 11, 4.1.57) ; Reactor Proposals, 5 ; Cross-Channel Cable, 9 ; Electrical Engineering in 1956, 9 ; A.C. Electrification, 55 ; Generating Plant Installed in C.E.A. Power Stations in 1956, 70 ; Plymouth "B" Power Station Extension, (97) ; Bradwell Nuclear Power Station, 121 ; Reorganisation of Bold Colliery, 180 ; Bradwell Nuclear Power Station, 282 ; Engineering Problems in the Application of Nuclear Energy, 282, 320 ; Industrial Disputes, 308 ; Electrical and Allied Plant, 335 ; Monopoly in the Electrical Industry, 355 ; Great Britain's 6,000MW Nuclear Power Programme, 357 ; Working to a Programme, 393 ; Synthetic Fluids for Transformer Cooling, 410, 451 ; Diesel-Mechanical Shunting Locomotive, 419 ; Bulk Supply Tariff, 525 ; Electrical Engineers Exhibition, 533, 570 ; 275kV System, 565 ; Efficiencies of Power Stations, 580 ; Continuous Slagging Boiler for Padiham Power Station, (626) ; Berkeley Power Station, 650, 991 ; Concrete Aggregates from Fly Ash, 707 ; Effect of Nuclear Power on 275kV Transmission System, 721 ; Industrial Investment, 733 ; Electric Power Gallery at the Science Museum, 783 ; Proposed Coal-Burning Power Station at Thorpe Marsh, 809 ; Generation Costs of Nuclear Power, 937 ; Padiham "B" Power Station (968) ; Electrical Power for Industry, 972
Central Electricity Generating Board, Electrical Engineering in 1956, 9
Central Office of Information, Trade with South Africa, 500 ; Travel in London, 601
Centralube Ltd., Automatic Crane and Crane Rail Lubrication (809)
Centre des Recherches Scientifiques Industrielles et Maritimes de Marseille, Magnetic Tape Machine Tool Automation Equipment, 924
Centre National d'Etudes de Telecommunications, Precision Contact for a Synchronous Clock, 924
Chamber of Shipping, Annual Report, 319
Chambers, L. R., The "Jaguar" Fire, 485
Chance Vought Aircraft Inc., "Crusader" Supersonic Aircraft, 16
Channel Tunnel Company, Ltd., The Channel Tunnel : Will it Ever be Driven ? 717
Chantiers de l'Atlantique (Penhoet-Loire), Nuclear Marine Propulsion, 660
Chapman, J. C., Interaction between a Ship's Hull and a Long Superstructure, 604
Chittaranjan Locomotive Works, Industrial Development in India, 917
Christiani and Nielsen, Road Tunnel Under Lower Fraser River, Vancouver, 48
Christopherson, D. G., Boundary Conditions in Lubricating Films, 100
Churchill Gear Machines Ltd., Automatic Loading Device for Gear Hobbing Machine, 220
Churchill, Sir Winston, Wartime Excavating Machine, 396
Cincinnati Milling Machine Company, "Hydrospin" Machine for Forming Jet Engine Parts, 275
Cinema Television, Ltd., Teaching Device for Royal Navy, 413
Cintel-Television Ltd., Electronic Printer for Aerial Photographic Negatives, 914
Citrine, Lord, Bradwell Nuclear Power Station, 121
Clan Line Steamers Ltd., Cargo-Passenger Liner "Clan Ross", 23
Clark, E. F., The Hydro-Pneumatic Engine, 6-8
Clarke, Nicholls and Marcel, Internal Combustion Research Centre, 761
Clavering, J. C., Internal Combustion Research Centre, 761
Clements, R. E., A Method of Analysing Voyage Data, (173)
Cleveland Bridge and Engineering Co., Ltd., Salmesbury Bridge, 20 ; Second Stage of the Neath By-Pass, 473
Close, W. G., Aspects of Works Study in Relation to Mainlaying, 783
Clough, Frederic Horton, Obituary, (390)
Clyde Engineering Company N.S.W., Passenger Train Service, Melbourne-Sidney, 250
Coast Lines Ltd., Motor Ship "Scottish Coast", 403
Coates, G., Oxygen Cutting Titanium and Titanium Alloys, 132
Cohen, Doris, Cambered Supersonic Wings, (664)
Cohen, Edward, Guide for Ultimate Strength Design of Reinforced Concrete, 110
Cohen, George, Sons and Co., Ltd., Liverpool Overhead Railway, 897
Colbeck, W. R., Salvaging of the "Empress of Canada", 128, 162
Collari, N., Aluminium-Tin Bearings, (402)
Colt Ventilation Ltd., Industrial Fire Control, 879
Colvilles Ltd., Scotland's First Nuclear Power Station, 216 ; World Iron Ore Reserves, 270
Combustion Engineering Incorporated, Eddystone Steam Power Station, 736 ; 60MW Nuclear Power Plant, 967
Commissariat a l'Energie Atomique (C.E.A.), Atomic Energy Establishments, 33
Committee for Foreign University Interchange, European University Interchange, 959
Commonwealth Edison Company, Dedication of Historic Steam-Turbo-Generator, 349
Compagnie Francaise Thomson-Houston, "Model TH.M.101" Leak Detector ; "Model TH.X.102" Measuring Instrument of Electrical Quantities, 925
Compagnia Shell de Venezuela, Semi-Trailer Shunting, (693)
Companhia Nacional de Electricidade, Portuguese Railway Electrification, 151
Concrete Ltd., Nine-Storey Building Frame of Precast Concrete, 973
Concrete Construction Company Ltd., Higham Service Reservoir, 44
Confederation of Shipbuilding and Engineering Unions, Wage Claims, 111 ; Engineering and Shipbuilding Wages, 399, 542, 733, 770, 848 ; Shipbuilding and Engineering Disputes, 462 ; Engineering Wages, 705, 820 ; Shipbuilding Wages, 916 ; Hours and Wages, 933 ; Forty-Hour Week, 959
Consolidated Vacuum Corporation, Titanium Iron Pump, 811
Convair Division of General Dynamics Corporation, Nuclear Research Aircraft "Convair NB-36H" (Plate 15, 4.1.57) ; "Hustler" Delta-Wing Bomber, (Plate 16, 4.1.57), 16 ; "F.102A" Interceptor, 16 ; "Eland Convair-Liner", 26
Conveyancer Fork Trucks Ltd., British Industries Fair, 684
Conway, H. G., The Leica Camera, 943
Conz Elektrizitats-Gesellschaft G.m.b.H., Heating and Power Plant, 697
Coode and Partners, Tunnel Under The Thames between Dartford and Purfleet, 531 ; Deep-Water Harbour at Bridgetown, Barbados, 821
Cooke, Troughton and Simms Ltd., Surveying Instrument for the Precise Measurement of Length, 538
Cooper, A. E., Labour Relations, 657
Copelaw Engineering Company Ltd., Portable Hydraulic Shear for Rods and Cables, 496
Coppee Company, Ltd., Reorganisation of Bold Colliery, 180
Copper and Alloys Ltd., Plastic Pipe Development, 881
Costain-John Brown Ltd., Abadan-Tehran Pipeline, 20 ; Trans-Iranian Pipeline, 513 ; Dounreay Atomic Energy Establishment, 747, 784, 823 ; Thrust-Boring Method of Culvert Construction, 881
Costain Mining Ltd., Acorn Bank Opencast Coal Site, (Plate 9, 11.1.57)
Costain, Richard, Ltd., Construction of Secondary Treatment Plant at the L.C.C.'s Northern Outfall, 610 ; Apapa Wharf, Lagos, (664) ; Deep-Water Harbour at Bridgetown, Barbados, 821
Coventry Gauge and Tool Company, Ltd., Internal Measuring Machine, 304
Coventry Victor Motor Company, Ltd., Engines at the National Boat Show, 102
Craig, Sir John, Obituary, 202
Crane Packing Ltd., Mechanical Shaft Seal for Corrosive Services, (86) ; Hard Metal-Faced Mechanical Seals, (732) ; Pump for Highly Corrosive Chemicals, (751)

Figures in Brackets ( ) refer to paragraphs

Cravens Ltd., Prototype Passenger Coaches for British Railways, 228
Croft, E. H., Consideration of Weight Transfer on B-B Electric Locomotives, 172
Crompton Parkinson Ltd., Nuclear Power Equipment, 5 ; Boost Melting Furnace, 55 ; Three-Phase Squirrel-cage Motors, 109 ; Tunnel Under the Thames between Dartford and Purfleet, 531 ; Electrical Engineers Exhibition, 571 ; Electronic Speed Controller ; Overload Trip for Electrically-Driven Plant, 766 ; Cellulose Wadding Mill at Aylesford, 875
Crompton, Thomas, and Sons, Ltd., Hinge-Making Factory, 693
Cross Company, Automation in 1957, 585
Crossley Bros., Ltd., Diesel Engines for H.M.S. "Lynx", 29 ; Dounreay Atomic Energy Establishment, 747, 784, 823
Culley, A. E., Obituary, 241
Cumbrian Implement Company Ltd., "Cumbrian" Ditch Cleaning Machine, 763
Cunard Steam-Ship Co., Ltd., Liner "Carinthia", (Plate 9, 4.1.57) ; 94
Cuno Schuckhaus K.G., Steel Lock for Tie Wires, 385
Curtiss, F. F. C., New Offices for British Railways Central Electrical Staff, 376
Curtiss-Wright Corporation, Extrusion Press, (Plate 16, 11.1.57) ; Aircraft Turbines, 593
Cyanamide Products Ltd., Developments at Stanlow Refinery, 728

D

Daimler-Benz A.G., Mercedes Benz Marine Engines, 102 ; Diesel Engines for Water Tractor, 273
Dallow Lambert and Co., Ltd., Portable Sawmill for Canada, 576
Daniels, T. C., Investigation of a Vortex Air Cleaner, 358
Danite Hard Metals Ltd., Grinding Wheel Dressers, (31)
Darling, R. F., Refractory Nozzle Blades for High-Temperature Gas Turbines, 251
Darlington Insulation Company, Ltd., Dounreay Atomic Energy Establishment, 747, 784, 823
Dassault, Generale Aeronautique Marcel, "Mystere" Jet Fighter, 884
Davey, Paxman and Co., Ltd., Wartime Excavating Machine, 396
Davie, George T., and Sons, Ltd., H.M.C.S. "Blue Throat", 65
Davie Shipbuilding Ltd., S.S. "Sunrip", 307
Davies and Metcalfe Ltd., Air Brake Gear, 913
Davy and United Engineering Company, Ltd., Cold Tandem Mill, (Plate 5, 11.1.57)
Dawe Instruments Ltd., "Visigauge" Measuring Device ; High Frequency Stroboscope, 494
Dawes, Stanley, S., Planning Success, 229
Dawson Brothers Ltd., Low-Frequency Ultrasonic Cleaning and Degreasing Machine, 724
De Dietrich et Cie, Railcars for Moroccan Railways, 230 ; Autorail Express Trains between Paris and Zurich, 869
De Havilland Aircraft Co., Ltd., "DH 110" Interceptor, 12 ; Jet Airliner "Comet", 53 ; Jet Propulsion, (390) ; Naval Interceptor, (508) ; Jet Airliner Variant, (816)
De Havilland Aircraft of Canada Ltd., Tactical Transport Aircraft, 461
De Havilland Propellers Ltd., Defensive Missiles, 694
Decca Navigator Company Ltd., Nuclear Weapon Tests, (236) ; Automatic Pilot, 378 ; Dectra Progress, (664)
Delbart, G., Low-Alloy Steels, 336
Delta Metal Company, Ltd., Plastic Pipe Development, 881
Demag A.G. (Duisburg), Ore-Handling Facilities, (Plate 14, 11.1.57)
Demag A.G., Fan Compressors, 231 ; Rourkela Steel Works, 347 ; Curved Track Plate Conveyor, 925
Dempster, R. and J., Ltd., Dounreay Atomic Energy Establishment, 747, 784, 823
Den Norske Hoyttaler-Fabrikk A/S, Self-Contained Portable Loudhailer, 850
Denny, William, and Brothers Ltd., "Duke of Rothesay", (Plate 11, 11.1.57)
Department of Scientific and Industrial Research, Injuries from Road Accidents, 43 ; National Lending Library for Science and Technology, 90 ; Grants for Graduate Students and Research Workers, 121 ; Work Sampling Techniques in Work Study, 245 ; Research in Nuclear Science, 318 ; Textile Processing Technique, 461 ; Industrial Psychology, 462 ; Seeing by Radio, 592 ; Travel in London, 601 ; Pollution in the Thames Estuary, 631 ; Hydraulics Research, 821 ; Timber Research, 935
Deutsche Fernseh G.m.b.H., Television Equipment for Testing Welded Pipes, 772
Deutsche Messe und Austellungs Ag, German Industries Fair, Hanover, 697
Dexion Ltd., Grandstands from Slotted Angles, 261
Dick, Alick, Communications in Industry, 40
Dick's Asbestos and Insulating Company, Ltd., Thermal Insulation Factory, 223
Dillinger Maschinenfabrik G.m.b.H., Heating and Power Plant, 697
Direction des Etudes et Fabrications d'Armement, Electric Contact Indicator ; Balance Valves, 924
Dixey, F., The East African Rift System, (264)
Dorey, S. F., Education and Training of Naval Architects and Marine Engineers, 253
Dorman, Long and Co., Ltd., Cleveland Plant, (Plate 5, 11.1.57) ; Annual Report, 32
Dorman Long (Bridge and Engineering) Ltd., Volta River Project, (Plate 2, 4.1.57) ; Higher Walton Bridge, 20 ; Volta Bridge, 185
Dorman Long (Steel) Ltd., Steel Works Coking Plant in Middlesbrough, 727
Dortmund Union, Construction of the Chainat Barrage in Thailand, 448
Douglas Aircraft Co., Inc., "Sky Hawk" Subsonic Delta, 18 ; "D.C.8" Jet Airliner, 53
Douglas, Robert M., (Contractors) Ltd., Synthetic Rubber Plant, 222
Doust, D. J., Model Experiments on a Series of 0.70 Block Coefficient Forms, 602
Dow Chemical Company, Hydraulic Press for Shaping Radioactive Materials, 777
Dow Corning Corporation, Surface Leakage Problems on High-Voltage Insulators, 387
Dowding and Doll Ltd., Rotary Milling Machine, 269
Dow-Mac (Products) Ltd., Frodingham-Scunthorpe Footbridge, 372
Dowty Equipment Ltd., Sponsorship Schemes in Remploy Factories, 303
Dowty Fuel Systems Ltd., Industrial Gas Turbine, 406
Dowty Group Ltd., Hydraulic Dynamometer for Mine Roof Control, (930) ; Roof Supports for Mechanised Coal Mines, 995
Dowty Hydraulic Units Ltd., Hydraulic Buffers for Railway Stock, 344
Dowty Seals Ltd., Sponsorship Schemes in Remploy Factories, 303
Doxford, William, and Sons (Shipbuilders) Ltd., Welded Aluminium Deep Tank Hatch Cover, 379
Drägerwerk, Heinr. and Bernh., Portable Gas Detector, 423
Drake, James, Lancashire's Road Development Programme, 20
Drews, Gerhard, K.G., Heating and Power Plant, 697
Drysdale and Co., Ltd., Holland America Liner "Statendam", 886
Duckworth, J. C., Nuclear Energy in Great Britain, 937
Duff, Sir James, The Durham Colleges, 935
Duncan, J. P., Nomogram for Steam Condenser Design, 642
Dunlop Rubber Company, Ltd., High Pressure Air Drying Equipment, 70 ; Synthetic Rubber Plant, 222 ; Repetitive Inflation of Tubeless Tyres, 539 ; Giant Earthmover Tyres, (664) ; Industry and Taxation, 959
Duralloy Corporation, High-Temperature Corrosion of Heat-Resisting Steels, 835
Dykes, P. de K., Slightly Oiled, 159

E

Eagle Engineering Company, Ltd., Semi-Trailers, (Plate 9, 11.1.57)
Eagle Tanker Company, Ltd., Oil Tanker, "San Felipe" (Plate 10, 11.1.57)
Eastern Electricity Board, Electrification of Southend (Victoria) Line, 68
Eastern Gas Board, Gas At Work In Industry, 107
Eastern Region British Railways, Electrification Extension to Southend-on-Sea, (Victoria), 4 ; Electrification of Southend (Victoria) Line, 68 ; Frodingham-Scunthorpe Footbridge, 372 ; Modernisation Works, (458) ; Railway Civil Engineer's Training Centre, (588) ; Progress of Potters Bar Railway Tunnel, 612 ; Track Recording Trolley, 845 ; Flat Slab Railway Overbridge, 915
Eastern Telephone and Telegraph Company, Transatlantic Telephone Cable, 176
Eccles, Sir Josiah, Presidential Address, 936 ; Electrical Power for Industry, 972
Eddison Plant Ltd., Torque Converter Roller, (757)
Edison Company, Sodium Graphite Reactor Electric Power Plants, 424
Edwards, F. J., Ltd., Small Toggle Press, (930)
E. H. (Service Depot) Ltd., Export Packaging, 958
Ekco Electronics Ltd., Electronic Setting Control ; "N611" Fluid Density Gauge ; "N565" Indicator Control Unit, 765
Eklund, B., Computer Microscope for Gauging Tree Growth, 423
Electric Construction Co., Ltd., High-Speed Drawbench, (Plate 4, 4.1.57) ; Electrical Engineers Exhibition, 570 ; "No-Break" Alternator Set for Standby Power Supply, 912
Electricite de France, "Rochar" Flicker Generator ; Flicker-Hour-Meter ; Chausey Current Recorder, 924
Electro-Chemical Engineering Company, Ltd., British Industries Fair, 684
Electrolytic Refining and Smelting Company of Australia Pty., Ltd., The Australian Copper Industry, 658
Electromagnets Ltd., Magnetic Separation, (878)
Elektro-Apparate-Bau G.m.b.H., Band Saw Butt Welder, 851
Elgar Machine Tool Company Ltd., Universal Grinder, 925
Ell, S. O., Developments in Locomotive Testing, 594
Ellerman and Bucknall Lines Ltd., Cargo Liner "Almerian", 94
Ellerman Lines Ltd., Cargo Liner "City of Colombo", 60
Elliot, B., and Co., Ltd., Manufacturer's Machine Tool Exhibition, (508)
Elliott Brothers (London) Ltd., Analogue Computer, (Plate 7, 11.1.57) ; Test House for Fuel Flow-meters, 161 ; Flow-meter Testing, 227 ; Integrated Control Systems, 725 ; Electronic Data-Processing System, 874
Elliott, John Wilson, Obituary, 473
Ellis, J. R., Start-Stop Time of a Geared System, 902
Empresa Nacional de Electricidad, Large Synchronous Condenser, 926
Engineering and Allied Employers' National Federation, Engineering and Shipbuilding Wages, 399, 848 ; Shipbuilding and Engineering Disputes, 462 ; Engineering Wages, 820
English Abrasives Corporation, Abrasive Cloth and Paper Plant, (1004)
English Electric Co., Ltd., Tilbury "A" Power Station, 9 ; P1 Interceptor, (Plate 6, 4.1.57), 16 ; Gas Turbines in 1956, 26 ; Electric Propulsion System ; Geared Turbines, 29 ; Ceannacroc Power Station, 46 ; Transonic Wind Tunnel, 55 ; Trawler "Portia", 94 ; Ventilated Squirrel-Cage Motors with Class-E Insulation, 306 ; Integration of European Trade, 462 ; Electric Locomotives Ordered for British Railways, 513 ; Electrical Engineers Exhibition, 571 ; 1,500 h.p. Main Line Diesel-Electric Locomotive for Malayan Railway, 574 ; All-Weather Fighter, 618 ; Defensive Missiles, 694 ; Diesel-Electric Trains for the Southern Region, 732 ; Dounreay Atomic Energy Establishment, 747, 784, 823 ; Linear Induction Pumps for Liquid Metals, 752 ; Main Line Diesel-Electric Locomotive for British Railways, 859 ; 1,000 H.P. Diesel-Electric Locomotives for British Railways, 913
English Electric Group, Nuclear Power Station, 5
English Electric Valve Company, Ltd., Travelling-Wave Tubes as U.H.F. Amplifiers, 267
English Glass Company, Ltd., Textile Processing Technique, (588)
Eriksbergs Mekaniska Verkstads A.B., Ship Production, 232
Erroll, F. J., Trade Improvement, (116)
Erskine Heap and Co., Ltd., Gas Turbine Power Station, 618
Escher Wyss, G.m.b.H., Geesthacht Pumped Storage Scheme, 543 ; Water Turbine for 1,200kW Generator, 734
Esso Petroleum Company Ltd., Oil Tanker "Esso Preston", 94
Etzel, Franz, The Euratom Report, 772
European Atomic Community, Establishment, 659
European Coal and Steel Community, 1955 Report, 33 ; Mobility of Labour in Western Europe, 191 ; Report, 698 ; Meeting, 897
European Productivity Agency, Materials Testing Mission to the U.S.A., 848
Eutectic Welding Alloys Company, Ltd., Low Temperature Welding, 188
Evans, E. W., Effect of Interrupted Loading on Mechanical Properties of Metals, 292, 325
Evans, J. C., Precision Comparator for Small Cylindrical Work, 716
Ever-Ready Company, Structural Application of Glass-Reinforced Plastic, 380
Evershed and Vignoles Ltd., Dounreay Atomic Energy Establishment, 747, 784, 823 ; Process Controller ; Analogue Computer, 765
Evode Ltd., Water-Repelling Treatment for Masonry, (468)
Ewbank and Partners Ltd., Volta River Project, 20 ; Dounreay Atomic Energy Establishment, 747, 784, 823

F

Fairbairn Lawson Combe Barbour Ltd., Shell Moulding Machine, 107
Fairclough, Leonard, Ltd., Lancashire's Road Plan, 20
Fairey Aviation Co., Ltd., "Rotodyne" Helicopter, 26 ; Fairey "Delta 2", 297 ; "Gannet" Anti-Submarine Aircraft, 49 ; Rotor Tip Pressure Jets, 686 ; Military Aircraft Developments, 847 ; "Jindivik" Target Aircraft, 922
Fairfield Shipbuilding and Engineering Co., Ltd., Passenger and Cargo Building at Southampton, (Plate 2, 4.1.57) ; Canadian Pacific Liner, "Empress of Britain", (Plate 9, 4.1.57) ; Cruiser "Blake", 65 ; Liner "Empress of Britain", 94
Farr, A. E., Ltd., Water Supply and Sewage Disposal, 44
Farrer, W. E., Ltd., Dounreay Atomic Energy Establishment, 747, 784, 823
Farrow, Howard, Ltd., Barnes Storage Reservoir, 186
Fawcett-Finney Ltd., British Industries Fair, 684
Federation of British Industries, Restrictive Trade Practices, 32 ; Petroleum Rationing of Industry, 43 ; Industry and European Free Trade, 308 ; Economic Problems and Policies, 346 ; Budget Proposals, 381 ; Trade with South Africa, 500 ; Two Events of Youthful Importance, 552 ; Annual General Meeting, 620 ; European Free Trade, 668 ; British Trade Fair at Helsinki, 733 ; Price Stability and Productivity, 883
Federation Europeenne de la Manutention, Seventh Meeting, 423
Federation Internationale de la Precontrainte, International Congress on Prestressed Concrete, (156)
Feher, G., Solid-State Oscillator for Microwave Frequencies, 389
Fenemore, A. S., Linear Induction Pumps for Liquid Metals, 752
Ferd., W., Klingelnberg, Sohne, Remscheid, Duplex Quenching Press, 232
Ferguson-Pailin Ltd., New Offices, (116) ; Electrical Engineers Exhibition, 533
Ferranti Ltd., Computer-Controlled Milling Machine, 55 ; Machine Loading—An Industrial Application of Computers, 169 ; Electrical Engineers Exhibition, 572 ; Computer Appreciation Course, (892)
Fescol Ltd., Heavy Chromium Deposition Plant, (575)
Fessler, H., Contribution Towards Rational Tee Slot Design, 904
Fevre, E. J. Le, Laminar Free Convection : A New Formula, 648
Field, J. E., Unification of Screw Thread Practice, 793
Fielding and Platt Ltd., Stretching and Detwisting Machine for Extruded Sections, 958
Findlay, Alexander, and Co., Ltd., Dounreay Atomic Energy Establishment, 747, 784, 823
Fink, P. T., Flow Field Over Slender Delta Wing, 16 ; The Hydroplane "Bluebird", 474
Firth Brown Tools Ltd., Pusher Furnace for Powder Metallurgy, 915
Firth Vickers Stainless Steels, Ltd., Soluble Wax Cores for Investment Casting, 578
Fisher and Ludlow Ltd., Line Production of Die Castings, 453 ; Component Handling at Machines, (677)
Fletcher, Stephen B., Traction Engine Railway Locomotives, 758
Fluidrive Engineering Co., Ltd., Wartime Excavating Machine, 396
Fokker, Royal Netherlands Aircraft Industries, De-icing Methods, (156)
Folland Aircraft Ltd., Jet Fighter "Gnat", 49
Foote-Burt Company, Automation in 1957, 585
Ford Motor Company, Ltd., Automobile Apprenticeships, 262 ; Industrial Disputes, 308 ; All-Wheel-Drive Diesel Truck, 385 ; Spares Storage and Handling, 653 ; Low Temperature Oxidation Plant, 769 ; Demise of a British "V-8" Engine, 782 ; Rationalised Engine Range, 802
Forges et Ateliers de Constructions Electriques de Jeumont, High-Voltage Surge Generator, 503 ; Electric Cable for Remote Control, 660
Forges et Ateliers du Creusot (Schneider), Nuclear Marine Propulsion, 660
Forges et Chantiers de la Mediterranee, Nuclear Marine Propulsion, 660
Foster Brothers Ltd., Plastic Pipe Development, 881
Foster Transformers Ltd., Test Transformer, 56
Foster Wheeler Corporation, Tank-Type Research Reactor, 927
Foster Wheeler Ltd., Formation of a New Atomic Group, 49 ; Synthetic Rubber Plant, 222 ; Nuclear Machinery for Submarine, (390)
Fothergill and Harvey (Sales) Ltd., Reinforcing Fabric for Waterproofing, (854)
Fouga, Air, "Magister" and "Marine" Jet Training Aircraft, 884
Foundation of Canada Engineering Corporation Ltd., Road Tunnel Under Lower Fraser River, Vancouver, 48
Fox, Samuel, and Co., Ltd., "Quantometer", (Plate 7, 11.1.57)
Foxwell, G. E., Obituary, 669
Frances, C. S. L., Jungle Clearance and Reclamation, 267
Francis, J. R. D., Friction Formulae in Rivers and Channels, 519
Franks, Sir Oliver, Institution of Electrical Engineers, 357
Fraser and Chalmers Engineering Works, Koepe Winding Plant, 140 ; Reorganisation of Bold Colliery, 180 ; D. C. Winder with Control Exciter at Silverwood Colliery, 182 ; Scotland's First Nuclear Power Station, 216, 260
Fraunhofer-Gesellschaft, Utilisation of Patents in Germany, 584
Freeman, Fox and Partners, Castle Donington Power Station, (Plate 2, 4.1.57) ; Volta River Project, (Plate 2, 4.1.57) ; Volta Bridge, 185
French, W. and C., Ltd., Deephams Sewage Treatment Works at Edmonton, (Plate 1, 11.1.57) ; Walton South Reservoir, and Chigwell Service Reservoir, 186
Freyssinet, Eugene, Gold Medal Award, (968)
Frigidaire Ltd., X-Ray Processing Equipment, 461
Frost, N. E., Fatigue Strength of Specimens Containing Preformed Fatigue Cracks, 864
Fry, E. R., Obituary, (854)
Frydag, K., Problems of Aircraft Production, 71 ; Nothing Recedes Like Success, 81
Furness Shipbuilding Company, Ltd., Oil Tanker S.S. "Panaghia", 94 ; Oil Tanker "Vivien Louise", 94
Fussell, G. E., Farming Machinery a Century Ago, 981

G

Galbraith, Mr., Steel for Shipbuilding, 462
Gallenkamp, A., and Co., Ltd., Bomb Calorimeter, 494
Gas Council, Industrial Investment, 733
Gawn, R. W. L., Effect of Cavitation in the Performance of a Series of 16in. Model Propellers, 558
Gaz de France Direction des Etudes et Techniques Nouvelles, "C.E.R.F." Electric Analogy Calculator, 925
G.E.C.-Simon-Carves Atomic Energy Group, Heat Transfer Laboratory, (Plate 3, 11.1.57) ; Transient Phenomena in Reactors, (Plate 7, 11.1.57) ; Nuclear Power Station, 5 ; Scotland's First Nuclear Power Station, 216, 260
Geddes, W. G. N., Civil Engineering Contributions to Shipbuilding, 513
Gell, A., All-Electric Furnace for Melting Glass, 55
General Dynamics Corporation, Convair "880" Jet Air-liner, 53 ; U.S.S. "Sea Wolf", 65
General Electric Co., 6,000-h.p. Gas Turbine, (Plate 5, 4.1.57) ; Research Reactor for Venezuela, 75 ; Modified 12 per cent. Chromium Steels, 137 ; Dedication of Historic Steam-Turbo-Generator, 349 ; "Borazon" Synthetic Diamond-Like Material, 815 ; 180MW Nuclear Power Station, 1,000
General Electric Co., Ltd., Hams Hall "C" Power Station, 9 ; "J.79" Engine, 26 ; "J.79" Engines, 53 ; Automatic Skip Winder, 55 ; High-Power Testing Laboratory, 56 ; U.S.S. "Saratoga" ; U.S.S. "Sea Wolf", 65 ; Electrification of Southend (Victoria) Line, 68 ; "Multiplexing" System for Remote Indication, 179 ; D.C. Winder with Control Exciter at Silverwood Colliery, 182 ; Scotland's First Nuclear Power Station, 216, 260 ; Power Station at Williamson Diamond Mines, 373 ; Electrical Machinery in a Phosphorus Factory, 492 ; Electric Locomotives Ordered for British Railways, 513 ; Main Line Diesel-Electric Trains, 521 ; Electrical Engineers Exhibition, 535 ; Exhibition of the Physical Society, 541 ; High-Temperature Vacuum Furnace, 655 ; 132kV. 5,000MVA Outdoor Oil Circuit Breaker, 691 ; Dounreay Atomic Energy Establishment, 747, 784, 823 ; Multiple-Unit Electric Trains, 844 ; Direct-Water-Cooled Stator Windings for Large Alternators, 878 ; Pusher Furnace for Powder Metallurgy, 915 ; A.C. Winders at Manvers Main Colliery, 958
General Motors Corporation, National Automobile Show, 193 ; Passenger Train Service, Melbourne-Sydney, 250
General Motors Ltd., "Firebird 11" ; XP-300, Twin Generators and Turbine Car, 26
General Nuclear Engineering Corporation, Research Reactor for Venezuela, 75
General Post Office, Transatlantic Telephone Cable, 135 ; New Offices for British Railways Central Electrical Staff, 376 ; Electrical Engineers' Exhibition, 533, 570 ; Mechanised Sorting Equipment, 688
German Productivity Council (RKW), Productivity and Local Co-operation, 152
Giacosa, D., Problems of the Small Utility Car, 616
Gibb, Sir Alexander, and Partners, Aswan High Dam ; Tehran Water Supply Scheme, 20 ; Errochty Dam, 46 ; Cliff Quay Extension, 801

Gibb, Sir Claude D., Engineering Problems in the Application of Nuclear Energy, 282, 320
Giffen, E., Engineering Education in the Soviet Union, 340
Gifford, E. W. H., Footbridge at Eel Pie Island, 261
Giles, J. G., Hydrokinetic Fluid Drives, 104
Giordani, Francesco, The Euratom Report, 772
Girdlestone Pumps Ltd., Small Centrifugal Pumps with Mechanical Shaft Seals, (540)
Girling Ltd., Disc Brakes for Railway Passenger Stock, (38)
Glacier Metal Company, Ltd., Work Sampling Techniques in Work Study, 245 ; Thin-Walled Bearings for Heavy Engineering Applications, (468)
Glanville, W. H., International Conference on Soil Mechanics, 110
Glenfield and Kennedy Ltd., Dounreay Atomic Energy Establishment, 747, 784, 823
Gloster Aircraft Co., Ltd., "Javelin", 26
Gloucester Carriage and Wagon Company, Ltd., Prototype Passenger Coaches for British Railways, 228
Godber, Lord, Festival of Industrial Films, 319
Golmet Ltd., Steel Roll Doors, (188)
Goodlet, B. L., Comparison of Continental, Russian and British Engineering Education, 203, 242
Goodrich, G. J., Model Experiments on a Series of 0.70 Block Coefficient Forms, 602
Gordon, James, and Co., Ltd., Automatic Control for Oil-Fired Boilers, 655
Gough, Cooper and Co., Ltd., Soil Stabilisation at Southend Airport, 631
Gough, H. J., Award of the James Clayton Prize, 121
Grace, H., Planning of Hong Kong Airport, 357
Graver Tank Company, Experimental Boiling Water Reactor at the Argonne National Laboratory, 699
Graviner Manufacturing Company, Ltd., Oil Mist Detector, 60
Great Lakes Steel Corporation, Universal Slabbing Mill, (Plate 16, 11.1.57)
Great Northern Railway of Northern Ireland, Diesel Railcars, 882
Greenock Dockyard Co., Ltd., Liner "Argyllshire" (Plate 10, 4.1.57) ; Cargo-Passenger Liner "Clan Ross", 23
Greenwood, H. W., Powder Metallurgy and Nuclear Research Today, 988
Gregory Industries, Stud Welding Fasteners for Curtain Walls, 274
Grumman Aircraft Engineering Corporation, "Tiger" Carrier-Borne Fighter, 16
Grundy, M. R., Open University Scholarship (236)
Guelph Plywood Company, Ltd., Portable Sawmill for Canada, 576
Gunner, A. M., Terminology in Gearing, 758, 836
Gutehoffnungshutte, Rourkela Steel Works, 347
Gutehoffnungshutte Sterkrade A.G., 25-ton Winding Gear, 771
Guthrie, D., Reversing Gear, 608
Gwynnes Pumps Ltd., Construction of the Chainat Barrage in Thailand, 448 ; Dounreay Atomic Energy Establishment, 747, 784, 823

H

Haefely, E., et Cie, High-Voltage Surge Generator, 503
Halcrow, Sir William, and Partners, Volta River Project, (Plate 2, 4.1.57), 20 ; Reconstruction of Shoreham Harbour, (Plate 11, 4.1.57) ; Ceannacroc Power Station ; Garry Dam, 46 ; Volta Bridge, 185 ; Thames-Lee Tunnelling Works, 186 ; Firth of Forth Road Crossing, 257 ; Progress of Potters Bar Railway Tunnel, 612 ; Dounreay Atomic Energy Establishment, 747, 784, 823 ; Marchwood Power Station, 908
Hall, Russell and Co., Ltd., M.V. "Bonavista", M.V. "Nonia", Oil Tanker "Esso Preston", 94
Hallam Vic Ltd., New Offices for British Railways Central Electrical Staff, 376
Hamburgische Elektrizitätswerke A.G., Geesthacht Pumped Storage Scheme, 543
Hammond, Rolt, The Channel Tunnel : Will It Ever be Driven ? 717
Hamworthy Engineering Company Ltd., High Pressure Air Drying Equipment, 70 ; Diesel-Electric Paddle Tugs for the Navy, 486 ; Portable Sawmill for Canada, 576
Handley Page Ltd., Boundary Layer Control, 53
Haniel and Lueg, G.m.b.H., Tubular Drill Mast, 811
Harding, J. V., Damping Capacity, 671
Hargreaves, H., and Sons, Ltd., Dounreay Atomic Energy Establishment, 747, 784, 823
Harland and Wolff Ltd., "Reina del Mar" (Plate 9, 4.1.57) ; Cargo Ship "Oti" (Plate 10, 4.1.57) ; "Duke of Lancaster", (Plate 11, 11.1.57) ; H.M.S. "Torquay", 29 ; H.M.S. "Powerful", 65 ; M.V. "Eden" ; Oil Tanker "Harvella" ; Liner "Reina del Mar" ; Oil Tanker "Solfonn" ; M.V. "Tuscany", 94 ; Salvaging of the "Empress of Canada", 162 ; 45,000-ton P. & O. Liner for Australian Service, 185 ; Motor Ship "Scottish Coast", 403 ; Motor Vessels "Ulster Prince", "Ulster Monarch", and "Ulster Queen", 403 ; Pressure Charged Two-stroke, Single-acting Engine, (508)
Harlow Development Corporation, Middle Lee Works, 44
Harper, Lionel, Agricultural Machinery Exports, 620
Harris, P. K., (Shipbuilders) Ltd., Tug "Sabre", 94
Harris and Sheldon Ltd., Synthetic Rubber Plant, 222
Harris, T. R., Arthur Woolf—Master Mechanic, 600
Hartley, Sir Harold, I.E.E. Honorary Membership, 83
Haslett, Dame Caroline, Obituary, 42
Hatton, A. P., Unsteady Thermodynamic Processes, 949
Hawker-Siddeley Nuclear Power Co., Ltd., Nuclear Power Equipment, 5
Hawthorn, Leslie (Engineers) Ltd., Oil Tanker, "San Felipe", (Plate 10, 11.1.57)
Hawthorn, Leslie (Shipbuilders) Ltd., Sugar Carrier "Crystal Gem" ; Oil Tankers "Horomya", S.S. "Vola", 94
Hayman, Sir Graham, Industry and European Free Trade, 308 ; Federation of British Industries, 620
H.D. and M. (Aviation) Ltd., Hurel-Dubois Military Transport Aircraft, 884
Head Wrightson and Co., Ltd., Reconstruction of Shoreham Harbour, (Plate 11, 4.1.57) ; Dounreay Atomic Energy Establishment, 747, 784, 823
Head Wrightson Aluminium Ltd., Welded Aluminium Deep Tank Hatch Cover, 379
Head Wrightson Machine Co., Ltd., High-Speed Drawbench, (Plate 4, 4.1.57) ; Heavy Plate Levelling Machine, 460
Head Wrightson Processes Ltd., Dounreay Atomic Energy Establishment, 747, 784, 823
Hebburn Ltd., Development and Growth of the Australian Steel Industry, 501
Hedley, Thomas, and Co., Ltd., Research Headquarters, 956
Hedlunds Travaru Company, Surveys for Engineering Development in British Columbia, (493)
Heenan and Froude Ltd., Helicopter Engine Testing, 264 ; Electrical Engineers' Exhibition, 571
Hein, Lehmann and Co., Radio and Television Mast at Steinkimmen, 73
Hellyer Brothers, Trawler "Portia", 94
Henderson, J. C. de C., Distribution Method for Circular Cylindrical Shells, 634
Heney and Trevorrow Aluminium Grandstand Roof, 579
Henleys, W. T., Telegraph Works Company, Ltd., Fire Resistant Cables for Aircraft, 407
Henry, J. K. M., Planning of Hong Kong Airport, 357
Henschel and Sohn, Kassel, "E41" Electric Locomotives, (Plate 13, 4.1.57) ; Steam Locomotives for South African Railways, 271 ; German Oil-Fired Locomotives, 584
Hetaeus, Hanau, Extruded "Zircaloy 2" Tubing ; Titanium Ion Pump ; Vacuum Arc Furnace, 811
Herbert, Sir Alfred, K.B.E., Obituary, 822
Herbert, Alfred, Ltd., "Edgwick" Die Casting Machine, 107
Herbert, Sir Edwin, Electricity Supply Committee, 9
Hewlett, E., The Professional Civil Service, 810
High Duty Alloys Ltd., Oxygen Cutting Titanium and Titanium Alloys, 132
High Voltage Engineering Corporation, Van de Graaff Generator, 55 ; Van de Graaff Accelerator, 77 ; Van de Graaff Accelerator for Liege University, 152 ; Super-Voltage Radiography, 965
Hill, A., High-Voltage Surge Generator, 648
Hill, G. H., and Sons, Dee Scheme, 44 ; Water Supply and Sewage Disposal, 44
Hills, S. C., A Trade Union Viewpoint, 581
Hilton, W. F., Negative Camber, 53
Hindustan Steel Ltd., Rourkela Steel Works, 347
Hinton, Sir Christopher, Operating Experience at Calder Hall, 241 ; The Future for Nuclear Power, 442 ; Electrical Research Association, 707
Hiscock, W. J., Urban Highway Maintenance, 43
Hobson, H. M., Ltd., "Nero" Experimental Low-Energy Reactor, 499
Hoffacker, H., Siegener Building, 812
Hogben, N., Ship Hull Pressure Measurements, 645
Holland and Hannen and Cubitts Ltd., Deephams Sewage Treatment Works at Edmonton, (Plate 1, 11.1.57) ; New Factory at Stratton St. Margaret, 372
Holloway Brothers (London) Ltd., Derby Sewage Works Extensions Scheme, 44 ; Berth at Tilbury Docks, 973
Holmes, W. C., and Co., Ltd., Low Temperature Oxidation Plant, 769 ; Cellulose Wadding Mill at Aylesford, 875
Holt, Alfred, and Company, Cargo Liner "Diomed", 60
Hommelwerke G.m.b.H., Surface Finish Measuring Instrument, 348
Hoover Commission, Development of Water Resources, 35
Horton, R. G. (Engineers), Ltd., Dee Scheme, 44
Hoskins, G. and C., Development and Growth of the Australian Steel Industry, 501
Hothersall, P., Higham Service Reservoir, 44
Hubbard, M. E., World Oil Supplies, 120
Hughes, T. H., Improved Methods of Particle Size Analysis, 860
Humphreys and Glasgow Ltd., Commercial Agreement for Pressurised-Water Power Plants, 161
Hunt and Mosscrop Ltd., Fluid Bed Technique for the Textile Industry, 651
Hunter, Sir Ellis, Problems for the Steel Industry, 32
Hunting Percival Aircraft Ltd., "P.74" Helicopter, 26
Hurel-Dubois, Societe de Construction des Avions, Military Transport Aircraft, 884
Husband and Co., Seeing by Radio, 592
Hutten und Walzwerks-Berufsgenossenschaft, Safety Competition, 888
Huttenwerk Oberhausen, Safety Competition, 888
Hydraulik, G.m.b.H. 8,000-ton Extrusion Press, 851
Hydro-Chemie Ltd., Reinforced Plastics Factory, 841
Hydromatic G.m.b.H., Steplessly Variable Hydraulic Transmissions, 812
Hymatic Engineering Company, Ltd., High Pressure Air Drying Equipment, 70 ; Mobile Air Compressor, 71 ; Emergency Energy Sources, 807

I

Imperial Chemical Industries Ltd., Germanium Rectifiers in Industry, 55 ; Huyghens Tercentenary Exhibition, 87 ; Oxygen Cutting Titanium and Titanium Alloys, 132 ; Natural Gas in Yorkshire, (185) ; Antioxidant Plant, (236) ; Fighter Policy, 279 ; Titanium in the Aircraft Industry, 295 ; Polytetrafluoroethylene, 305
Imperial College of Science and Technology, Jubilee, 168 ; Aeronautics at, 838
Imperial War Museum, Wartime Excavating Machine, 396
Indian Iron and Steel Company, Industrial Development in India, 917
Ingen-Housz, A. H., Presidential Address, 833
Ingle, F. W., Flexible Roads Recently Constructed Using Low Grade Materials, 615
Inglis, Sir Claude, The Thames Estuary Investigations, 895
Inland Steel Company, Production of Broad-Flanged Beams, (Plate 16, 11.1.57)
Institut d'Optique Theorique et Appliquee, Fog Droplets Measuring Instrument, 924
International Combustion Ltd., Five-Ton Mains-Frequency Coreless Induction Furnace, 490
International Combustion (Nuclear Applications) Ltd., Dounreay Atomic Energy Establishment, 747, 784, 823
International Electrical Association Ltd., Electrical and Allied Plant, 335
International Harvester Company of Great Britain Ltd., Hay and Straw Baler, (Plate 8, 11.1.57)
International Meehanite Metal Company, Ltd., Damping Capacity, 671
International Nickel Company of Canada Ltd., Sulphur Recovery Plant, (236) ; Sudbury Nickel Ores, (380) ; Refining and Using Nickel, 720
Ipswich Dock Commission, Cliff Quay Extension, 801 ; Dredger "Samuel Armstrong", (Plate 11, 11.1.57)
Iron and Steel Board, Building Frame and the Steel Shortage, 286 ; Iron and Steel, 308, 620, 770, 959 ; Steel for Shipbuilding, 462 ; N.E. Coast Steelworks Development, 542 ; Machine Tool Trades Association, (548)
Iron and Steel Corporation Ltd., Slag and Masonry Cement, 383
Iron Ore Transport Company Ltd., Ore Carrier "Ruth Lake", 94
Ishikawajima Jyuko Company, Destroyer Escort "Akebono", 90
Isles of Scilly Steamship Company, "Scillonian", (Plate 11, 11.1.57)
Iwel Ltd., Solvent Extraction Plants, 459

J

Jackson, Philip, Harvesting Machinery for Brown Sub-littoral Seaweeds, 400, 439
Jaeger, C., Comparison of Continental, Russian and British Engineering Education, 203, 242
James, Sir John, Steel Prices, 308
James, W., Damtheism, 215
Jaray, F. F., Exhibits at the Chemical, Rubber and Plastics Exhibition, Paris, 190
Jarvis, R. G., The Application of Gear Drives to Locomotives, 783
Jenkins, Robert, and Co., Ltd., Heat Exchangers, 190
Jenolite Ltd., Anti-Corrosion Coating, (59)
Jephcott, Sir Harry, Steel Castings Research, 859
Jepson, F., Improvement on A.5 in Staffordshire, (25)
Jessop, William, and Sons, Eddystone Steam Power Station, 774
Jobling, James A., and Co., Ltd., Industrial Glass Pipelines, 415
Johnson, A. J., Some Observations on Local Vibration, 60 ; Stresses in Deckhouses and Superstructures, 604 ; Ship Vibration, (664)
Johnson, C. H. T., Radio Communication and Electronic Engineering Association, 201
Johnson, James, Wear and Tear, 605
Johnson, L. O. C., Changes in a 50m Mural Tape Standardising Base, 632
Johnson, Matthey and Co., Platinum Metals Review, 137
Johnson, Morrison, Dollar Exports, 848
Johnson, T., A Nuclear Engineers' Institute ? 907
Jones, Aubrey, Royal Ordnance Factories, 189, 745
Jones, Sir Henry, Junior Institution of Engineers' Dinner, 669
Jones, R. T., Aeronautics in 1956, 16
Joy-Sullivan Ltd., Improved Continuous Mining Machine, 306
Judson Pacific-Murphy Corporation, Richmond-San Rafael Bridge, (Plate 15, 11.1.57)
Junghans, W., Heating and Power Plant, 697
Junker, Otto, G.m.b.H., Five-Ton Mains-Frequency Coreless Induction Furnace, 490

K

Kaiser Aluminium and Chemical Corporation, Stepped Aluminium Alloy Extrusions, 114 ; Aluminium Production in the Ohio River Valley, 427
Kampnagel Aktiengesellschaft, Level Luffing Crane, 697
Karman, Theodore von, Lanchester Memorial Lecture, 745
Kawasaki Jyuko Company, "Ikazuchi", 92
Keelavite Rotary Pumps and Motors Ltd., Hose Handling Equipment, 379
Keighley Grinders (M.T.) Ltd., Automatic Internal Grinding Machine, 459
Keir and Cawder Ltd., Construction of the Chainat Barrage in Thailand, 448
Kelly, M. J., Enrico Fermi Professorship at the University of Chicago, 815
Kelly, Mervin, Transatlantic Telephone Cable, 176
Kelvin and Hughes Ltd., Automatic Ultrasonic Inspection, 455 ; The Channel Tunnel, 717
Kelvin and Hughes (Industrial) Ltd., Electronic Controllers ; Automatic Ultrasonic Testing, 726
Kemp, A. J., and Son, Ltd., Advances in Aircraft Bonding, 564
Kemp, E., Distribution Method for Circular Cylindrical Shells, 634
Kennedy and Donkin, Ceannacroc Power Station, 46 ; Scotland's First Nuclear Power Station, 216, 260
Kent, R. G., Growth of Exports, (116)
Kidd, R. A., Oxton By-pass Extension, 44
Kieler Howaldtswerke A.G., Hydraulic Transmission, 999
Kier, J. L., and Co., Ltd., Cliff Quay Extension, 801
Kieserling, Th., and Albrecht, Tube-Straightening Machine, 660
Kiewit, Peter, Sons, Company, Richmond-San Rafael Bridge, (Plate 15, 11.1.57)
Kimberley-Clark Ltd., Opening of Wadding Mill, 669 ; Cellulose Wadding Mill at Aylesford, 875
Kincaid, John G., and Co., Ltd., Cargo Liner "Diomed", 60
Kindt-Collins Company, Uniform Sheet Wax, 882
King, Geoffrey K., Traction Engine Railway Locomotives, 300
King, H. G. C., Manufacture of Plastic Patterns for Moulding, 617
Kingsford, P. W., F. W. Lanchester, 100
Kinnear Moodie and Co., Ltd., Progress of the Metropolitan Water Board's New Works during 1956, 186
K.L.G. Sparking Plugs Ltd., Turbine Relighting, 213
K. and L. Steelfounders and Engineers Ltd., Fast-Travelling Crane, 808
Klingelnberg, W. Ferd, Soehne, Hob Testing Machine, 385 ; Hobbing Machine for Small Cyclo-Palloid Bevel Gears, 545
Klinger-Hubbard, Large Chamber Level Gauges, 769
Klinger, Richard, Ltd., Gas Sampling Manifold at Calder Hall, 219
Knitted Mesh Manufacturing Company, Knitted Materials, (854)
Kodak Ltd., Film Processing Equipment, 269 ; X-Ray Processing Equipment, 461
Krupp-Ardelt G.m.b.H., 120-ton Railway Crane, 734
Krupp-DEMAG, Rourkela Steel Works, 347
Krupp, Fried, Construction of the Chainat Barrage in Thailand, 448 ; New Building, 697 ; 120-ton Railway Crane ; Reduction and Smelting of Low-Grade Metallic Ores, 734 ; German Nuclear Power, 773
Krupp, Fried, Maschinen und Stahlbau Rheinhausen and Associates, Federal Statistical Office, (Plate 14, 11.1.57)
K.S.B. Manufacturing Company, Ltd., Developments at Stanlow Refinery, 728
Kubach, F. W., Tube-Straightening Machine, 660
Kuhlmann, Franz, K.G., Instrument for Perspective Drawing, 273
Kusters, Wilh., Dampfkesselfabrik, Water-Tube Boiler, 811

L

Laboratoire d'Electrotechnique et d'Electronique Industrielle, High Voltage Oscillograph, 924
Laboratoires de Bellevue, Vacuum Spectrograph, 924
Laboratoires d'Electrostatique et de Physique du Metal de Grenoble, Liquid Hydrogen Producing Machine ; Electrostatic Generator, 924
Laing, John, and Son, Ltd., Berkeley Nuclear Power Station, 143, 650 ; Wind Tunnel, 372
Lambert, A. L., Traction Engine Railway Locomotives, 682
Lamberton and Co., Ltd., Automatic Billet Shear, 259
Lancashire County Council, Longton By-pass Road, 840
Lancashire Dynamo Electronic Products Ltd., Smoke Indicator and Alarm Unit ; Fractional h.p. Electronic Variable Speed Drive ; 726
Lancashire Steel Corporation Ltd., Steel Prices, 308
Lane, F. J., 275kV System of the Central Electricity Authority, 565
Lang Pneumatic Company, Repetitive Inflation of Tubeless Tyres, 539
Langlet, O., Computer Microscope for Gauging Tree Growth, 423
Lansing-Bagnall Ltd., Rider Controlled Electric Fork Truck, (468)
Lantz, A. D., Surface Leakage Problems on High-Voltage Insulators, 387
Laurence, Scott and Electromotors Ltd., Teaching Device for Royal Navy, 413 ; Air-Cooled Induction Regulator, 572 ; Dounreay Atomic Energy Establishment, 747, 784, 823 ; Analogue Measuring Instrument, 766
Law, R. J., Hooke's Inventions, 138
Lee, F., Safety Devices for Agricultural Machinery, 405
Leech, Kenneth H., George Jackson Churchward, 300
Leeds and Northrup Company, Eddystone Steam Power Station, 736 ; Integrated Control System, 967
Lenaghan, James, Ocean Iron Ore Carriers—Design Considerations, 524
Leningrad Metallurgical Works, Kuibyshev Hydro-Electric Power Station, 463
Leslie and Co., Ltd., Self-Erecting Climbing Crane, 805
Levermore, A., and Co., Ltd., Metal Marking, (1004)
Lewicki, W., Hydrodynamic Lubrications of Piston Rings and Commutator Brushes, 84, 122
Lewis, Bernard, "Combustion and Flame" New Journal, (527)
Lewis, John, and Sons, Ltd., Trawlers "Kelso Paton", and "Duff Paton", 94
Leyland Motors Ltd., "Atlantean" Double-Deck Bus, (Plate 3, 4.1.57) ; Coach Transmissions, (276) ; Positive Axle Lubrication, (732)
Libby, W. F., Global Distribution of Radioactivity from Nuclear Detonations, 233

Lickley, R. L., Fighter Policy, 279 ; The Fairey "Delta 2", 297 ; Advanced Aeronautical Education, 488
Liebman, R. C., Ninth International Liege Fair, 232
Lightfoot Refrigeration Company, Ltd., Air Driers, (664)
Lincoln Electric Company, Ltd., Electric Welding Plant and Electrode Factory, 757
Lind, Peter, and Co., Ltd., Reconstruction of Shoreham Harbour, (Plate 11, 4.1.57)
Lindsay, F. E., Let's Forget the Cycloid Tooth, 648 ; Terminology in Gearing, 836
Linke-Hofmann-Busch G.m.b.H., Six-Axle Twin-Car Diesel Trains, 926
Liquid Systems Ltd., Cellulose Wadding Mill at Aylesford, 875
Lister-Blackstone, "No-Break" Alternator Set for Standby Power Supply, 912
Little, T. R., and Co., Salvaging of the "Empress of Canada", 162
Liverpool Artificial Stone Company, Ltd., Footbridge at Eel Pie Island, 261
Lizzini, F.Ili., Universal Grinder, 925
Lloyd, F. H., and Co., Ltd., Wartime Excavating Machine, 396
Lloyd's Register of Shipping, Shipbuilding Returns, 23, 149, 634 ; Wreck Returns, (236), (564) ; Ships Launched in 1956, 319 ; Shipbuilding Challenge, 394 ; Dounreay Atomic Energy Establishment, 747, 784, 823
Lobeck Casting Processes Incorporated, Continuous Casting Machine for Non-Ferrous Metals, 350
Lobnitz and Co., Ltd., Dredger "Amanful" ; Tug "Otago", 94
Lockheed Aircraft Corporation, Supersonic Aircraft "Lockheed YF-104", (Plate 16, 4.1.57) ; "XF-104" Starfighter, 16 ; C-130 "Hercules" Medium Transport Aircraft, 922
Lockheed Hydraulic Brake Company, Ltd., Open University Scholarship, (236)
Loma Machine Manufacturing Company, Twenty-High Cluster Mill for Rolling Ultra-Thin Strip, 351
London County Council, Cromwell Road Extension ; Rejection of Proposals, 44 ; Robert Blair Fellowships in Science and Technology, (156) ; Construction of Secondary Treatment Plant at the Northern Outfall, 610 ; Park Lane Improvement Scheme, 631 ; Country Industries Exhibition, (702) ; Blackwall Tunnel Improvement, 745
London and Home Counties Regional Advisory Council for Higher Technological Education, Annual Report, 173
London Midland Region of British Railways, Last of the "Brewery Shunters", (38) ; Prefabricated Railway Bridges, 44 ; A. C. Railway Electrification, 55 ; Track Circuiting Equipment for British Main Line Electrification, 460 ; Railway Apprentice Training School, (559) ; Heavy Express Locomotive Trials, 560, 594 ; Manufacture of Plastics Patterns for Moulding, 617 ; Multiple-Unit Trains, 844
London and Thames Haven Oil Wharves Ltd., Two Fire-Fighting Tenders, 498
London Transport Executive, Wage Claims, 111 ; Sleet Tender, 226 ; London Passenger Transport, (428) ; Portable Hydraulic Pinion Press, 881 ; Oscillographic Recording on British Railways, 375 ; Travel in London, 601
Lorant and Co., Ltd., High-Speed Disc Grinder, 964
Losenhausenwerk A.G., Fatigue Laboratory, (276)
Lover, P. P., Diagnosis and Analysis of Plain Bearing Failures, (694)
Lundberg Exploration Company, Surveys for Engineering Development in British Columbia, (493)
Lyon, Arthur, and Co. (Engineers) Ltd., Electrical Engineers Exhibition, 533
Lysaght Brothers and Co. Proprietary, Ltd., Australian Wire Weaving Industry, 382
Lysaght Durham Chemical Company Pty., Ltd., Development and Growth of the Australian Steel Industry, 501
Lysaght, John, Ltd., Australian Wire Weaving Industry, 382
Lysaghts and Commonwealth Steel Company, Ltd., The Australian Copper Industry, 658

M

Maag Gear-Wheel Company, Ltd., Holland America Liner "Statendam", 886
McAlpine, Sir Robert, and Sons, Ltd., Marchwood Power Station, 908
McAlpine, Sir Robert, and Sons (Newcastle-upon-Tyne), Ltd., Dry Dock at Wallsend, 801
McArthur Microscopes Ltd., Research Microscope, 494
McCance, Sir Andrew, World Iron Ore Reserves, 270
MacDonald, Sir Murdoch, Obituary, 670
McDonnell Aircraft Corporation, "Voodoo" Long-Range Fighter, 16
McGillivray, J. B., Obituary, (930)
McInnes, Gardner and Partners, 45,000-ton Liner for Australian Service, 185
McLaren, J. and H., Ltd., Wartime Excavating Machine, 396
MacLellan, P. and W., Ltd., Dounreay Atomic Energy Establishment, 747, 784, 823
MacTaggart Scott and Co., Ltd., Diesel-Electric Paddle Tugs for the Navy, 486
Maginness, Sir Greville S., Anglo-Soviet Trade, 620
Manawatu Aerial Top-Dressing Company, Agricultural Aircraft, (304)
Manby, T. C. D., Tractor Testing Techniques, 593
Manchester Collieries Ltd., Reorganisation of the Bradford Colliery, 140
Manchester Slate Company, Ltd., Dounreay Atomic Energy Establishment, 747, 784, 823
Mange Plastics Ltd., Joint for Polythene Tubes, 653
Mann Egerton and Co., Ltd., 10-ton Truck, (Plate 3, 4.1.57)
Mannesmann-Meer Aktiengesellschaft, Vertical Steam Engine, 811
Manzoni, Sir Herbert J., Birmingham Inner Ring Road, 395
Maratray, F., Low-Alloy Steels, 336
March Ltd., "Nero" Experimental Low-Energy Reactor, 499
Marconi Instrument Ltd., Closed-Circuit Television Monitor, 55
Marconi's Wireless Telegraph Company, Ltd., Tropospheric Scatter Link, 55 ; 16mm. Television Recording Equipment "BD679", 108 ; Radio-Telephone Link for Portugal, 149 ; Wide-Band Radio Communications Equipment, 266 ; Remote Operation and Observation, 377
Marine Industries Ltd., H.M.C.S. "Assiniboine", 65
Marples, Ridgway and Partners, Ltd., Deephams Sewage Treatment Works at Edmonton, (Plate 1, 11.1.57) ; Ford Modernisation and Expansion Scheme, 650
Martin, F. R., Recent Developments in Airfield Runway Construction, 44
Martin, Glenn L., Company, Missile Development Programme, 813
Martins Bank Ltd., Selling Overseas, 111
Martonair Ltd., Portable Sawmill for Canada, 576
Marubeni-Iida, Research Reactor for Japan, 75
Maschinenfabrik Augsburg-Nurnberg A.G. (M.A.N.), German Structural Steelwork, (Plate 14, 11.1.57) ; Low-Pressure Turbine Rotor of 150MW Turbine ; 10m. Jib, 734
Maschinenfabrik Buckau R. Wolf A.G., Mixed-pressure Boiler, 812
Maschinenfabrik Esslingen, 15-ton Mandrel Lift Truck, 771
Mason, A. P., Floating Stations for Nuclear Power Plants, 338
Massey, H. S. W., Scientific Investigation of the Upper Atmosphere, 342
Massey-Harris-Ferguson Ltd., Combine Harvester, (Plate 8, 11.1.57)
Mather, L. E., Manufacturing Costs, 500
Mather and Platt, Ltd., Synthetic Rubber Plant, 222 ; Manufacturing Costs, 500 ; Fluid Bed Technique for the Textile Industry, 651 ; Cellulose Wadding Mill at Aylesford, 875
Matisa Equipment Ltd., Track Recording Trolley, 845
Matling Ltd., Fork Lift Truck, 656
Matthew Hall Ltd., Dounreay Atomic Energy Establishment, 747, 784, 823
Maunsell, G. A., and Partners, Firth of Forth Road Crossing, 257
Mayer, A., Prestressed Concrete Runways, 319
Mayne, J. E., Jungle Clearance and Reclamation, 267
Mayo, R. H., Obituary, 357
M.B.C. (Office Systems) Ltd., Drawing Stand, 915
Meadows, Henry, Ltd., Diesel and Petrol Engines, 102 ; Miniature Motor Car, 419 ; Construction of the Chainat Barrage in Thailand, 448
Medical Research Council, Initial Volume of Accessions, 90
Meldrum, Flood Page Ltd., Grit Arrester and Smoke Abatement Equipment, 148
Menck and Hambrock G.m.b.H., Quarry Shovel, 504
Mendip (Chemical Engineering) Ltd., Structural Application of Glass-Reinforced Plastic, 380
Menelaus, F. A., Reamers for High-Tensile Steels, 99
Menter, Dr., Electron Micrographs, 55
Merryweather and Sons, Ltd., Two Fire-Fighting Tenders, 498
Mersey Docks and Harbour Board, Large Dockside Shed, 44 ; Salvaging of the "Empress of Canada", 162
Merz and McLellan, Chapel Cross Nuclear Power Station, 5 ; Finlarig Power Station, 46
Metal Manufactures Ltd., The Australian Copper Industry, 658
Metal and Pipeline Endurance Ltd., Cathodic Projection, (236)
Metalock (Britain) Ltd., Repair of a Large Casting, (407)
Metals and Controls Corporation, Nuclear Fuel Elements, 966
Metropolitan-Cammell Carriage and Wagon Company, Ltd., Prototype Passenger Coaches for British Railways, 228 ; Main Line Diesel-Electric Trains, 521
Metropolitan-Vickers Electrical Co., Ltd., Single-Axis Generating Set ; A.C. Generator, 9 ; Mass Spectrometer, (Plate 7, 11.1.57) ; 2,500kW Generator, 26 ; Oil Tanker "Vivien Louise", 94 ; Koepe Winding Plant ; Turbo-Compressors, 140 ; Turbo-Alternator Sets, 143 ; Ship Model Experimental Tank, 145 ; High-Frequency Injector for Arc Welding, 146 ; 200MW Turbo-Generators for Willington "B" Power Station, 173 ; Reorganisation of Bold Colliery, 180 ; Electrical and Allied Plant, 335 ; Synthetic Fluids for Transformer Cooling, 451 ; Electronic Digital Computer, 456 ; High-Intensity Infra-Red Projector, 461 ; The Hydroplane "Bluebird", 474 ; Electric Locomotives Ordered for British Railways, 513 ; Electrical Engineers Exhibition, 534 ; Exhibition of the Physical Society, 541 ; Photo-Transistor Relay, 579 ; Nomogram for Steam Condenser Design, 642 ; "Metrovick 950" Electronic Digital Computer ; "Magistor" Photo Transistor Relay ; "MS6L" Mass Spectrometer ; 725 ; Dounreay Atomic Energy Establishment, 747, 784, 823 ; Kinetic Heating in Aircraft and Guided Missile Structures, 957
Metropolitan Water Board, Filtration Plant, (Plate 5, 4.1.57) ; 2,500kW Generators, 26 ; New Works During 1956, 186 ; Progress of Potters Bar Railway Tunnel, 612
Mettam, H. A., Advanced Aeronautical Education, 608
Michelotti, G., Miniature Motor Car, 419
Microcell Ltd., Glass Fibre Aircraft Seat, (719)
Middlesex County Council, Cromwell Road Extension, 44
Midland Bank Ltd., Planning Problems, 150
Milburn, J., Refractory Nozzle Blades for High-Temperature Gas Turbines, 251
Miles Aircraft Ltd., Hurel-Dubois Military Transport Aircraft, 884
Miles, F. G., Ltd., M.100 "Student" Training Aircraft First Flight, 809
Millars' Machinery Company Ltd., Hydraulic Separators for Grading Sands and Powders, 187
Miller, James, and Partners Ltd., Progress of the Clifton Bridge, Nottingham, 872
Mills, R. E., Contour Etching, 98
Milton, J. H., Marine Machinery Break-Downs, (664)
Ministry of Agriculture, Ditch Cleaning Machines, 763
Ministry of Education, Radio Isotopes in Scientific Research, 698 ; Technical Education, 788 ; Liberalising Education, 857
Ministry of Fuel and Power, Padiham "B" Power Station, (968)
Ministry of Housing and Local Government, Committee on Synthetic Detergents, (179)
Ministry of Labour, Size of Manufacturing Establishments, 32 ; Changes in Wage Rates, 32, 229, 381 ; Employment and Unemployment, 111, 308, 420, 581, 770, 959 ; Industrial Disputes, 229, 695 ; Average Earnings, 542 ; Labour Relations ; Employment and Defence Production, 657 ; Temporary Transfer of Workers, 770 ; Restrictive Practices, 810 ; Time Lost Through Disputes, 883 ; Safety in Non-Ferrous Foundries, 996
Ministry of Power, Coal Consumption, 229
Ministry of Power Stations, Russian Water Power, 849
Ministry of Supply, Oxygen Cutting Titanium and Titanium Alloys, 132 ; Supersonic Airliner Projected, 189 ; Titanium in the Aircraft Industry, 295 ; Wind Tunnel, 372 ; Wartime Excavating Machine, 396 ; Harvesting Machinery for Brown Sub-littoral Seaweeds, 400 ; The Hydroplane "Bluebird", 474 ; Bristol "Bobbin" Test Vehicle for Ramjets, 497 ; The Royal Ordnance Factories, 745 ; Future of the Aircraft Industry, 821 ; M. L. Utility Aircraft, 846
Ministry of Transport and Civil Aviation, Improvement on A.5 in Staffordshire, (25) ; Disagreement Amongst the Eminent, 240 ; New Offices for British Railways Central Electrical Staff, 376 ; Microwave Course Beacon, 378 ; Tunnel Under the Thames between Dartford and Purfleet, 531 ; Blackwall Tunnel Improvement, 745 ; Longton By-pass Road, 840 ; Automatic Train Control, (930) ; Contracts for Road Schemes, 935 ; Railway Travel Exhibition, (968)
Ministry of Works, Civil Engineering in 1956, 20 ; Building Plant Exhibition, (588) ; Research Buildings and Training Centre, 707
Mitchell Construction Company, Ceannacroc Power Station, 46
Mitchell Engineering Ltd., 15MW Nuclear Power Station for West Germany, 575 ; German Nuclear Power, 773
Mitchell, James, Institution of Metallurgists, 821
Mitchell, L. A., Ltd., Reinforced Plastics Factory, 841
Mitsubishi Zosen Company, Japanese Destroyer, "Harukaze", 92
Mitzui Zosen Company, "Inazuma", 90
Mobil Oil Company, Ltd., Hose Handling Equipment, 379
Mobil Overseas Oil Company Inc., Oil Refinery for Turkey, (702)
Modular Concrete Company, Modifications in a Precast Concrete Works, 496
Monarch Machine Tool Company, Automatic Loading Device for Centre Lathe, 275
Mond Nickel Company, Ltd., Sulphur Recovery Plant, (236)
Monk, A., and Co., Ltd., Reinforced Concrete Tower, 140
Monk, Arthur, and Co., Ltd., Water Supply and Sewage Disposal, 44
Monopolies and Restrictive Practices Commission, Electrical and Allied Plant, 335 ; Electronic Valves and Cathode-Ray Tubes, 346 ; Monopoly in the Electrical Industry ? 355
Monsanto Chemicals Ltd., Synthetic Fluids for Transformer Cooling, 410, 451
Montana Power Company, Kerr Dam, 35
Morandi, Riccardo, Lecture in London, (390) ; Modern Conceptions in the Planning of Bridges in Reinforced Concrete and in Prestressed Concrete, 583
Mordell, Donald L., Indirect-Fired Gas Turbines, 210
Morgan Crucible Co., Ltd., Lip-axis Tilting Crucible Furnace, 107 ; Refractory Nozzle Blades for High-Temperature Gas Turbines 251
Morgan, S., Smith Company, Kaplan Turbine Rotors, 35
Morris Motors Ltd., B.M.C. "Vedette", B.M.C. "Navigator", B.M.C. "Commander", B.M.C. "Commodor", Marine Engines, 102
Morton, Francis, and Co., Ltd., Fabricated Steelwork, 44
Moss, William, and Sons, Ltd., Deephams Sewage Treatment Works, at Edmonton, (Plate 1, 11.1.57) ; Internal Combustion Research Centre, 761
Motherwell Bridge and Engineering Co., Ltd., Scotland's First Nuclear Power Station, 216, 260 ; Dounreay Atomic Energy Establishment, 747, 784, 823
Motor Vehicle Research Inc., Toll Roads in the U.S.A., 323
Mott, Hay and Anderson, Firth of Forth Road Crossing, 257 ; Tunnel Under the Thames between Dartford and Purfleet, 531
Mowlem, John (Scotland) Ltd., Scotland's First Nuclear Power Station, 216, 260
Muirhead Ltd., Portable Sawmill for Canada, 576
Mullard Ltd., Ultrasonic Generator for Drilling and Soldering Applications, 228 ; Electronic Valves and Cathode-Ray Tubes, 346 ; 5MeV Linear Accelerator for Industrial Radiography, 654 ; "Autoplot" Positioning Machine for Drilling, Marking Out and Plotting Operations on Sheet Metals ; "L188" Particle Counter ; Ultrasonic Variable-Delay Line ; 724 ; Low-Frequency Ultrasonic Cleaning, 724 Transistor Manufacture, 909
Muller, C. H. F., Television Equipment for Testing Welded Pipes, 772
Myers, F. H. E., Floating Stations for Nuclear Power Plants, 214
MZB Messzeug G.m.b.H., Vernier Bevel Protractor, 273

N

Nabarro, Gerald, Thermal Insulation of Industrial Buildings, 433 ; Thermal Insulation by Compulsion, 472
Nadin, Joseph, Ltd., Synthetic Rubber Plant, 222
Napier, D., and Son, Ltd., "Eland" Helicopter Power Plant, 26 ; "Oryx" Turbo-Gas Generator, 26 ; Electrical De-Icing, (156) ; "Deltic" Diesel Engine, 224 ; Advanced Aeronautical Education, 488 ; "Gazell" Gas Turbine, 690
Nash, S. G., Contour Etching, 98
Nash and Thompson Ltd., Electro-Mechanical Computer, 541 ; Fluid Network Analyser ; Shorted-Turn Detector, 765
National Bureau of Standards, High-Head Turbine Test Stand, 153 ; X-Ray Studies of Stresses in Metals, 154 ; Penetration and Diffusion of Gamma-Rays, 193 ; Electrodynamic Calibration of Vibration Pick-ups, 586 ; High-Precision Interferometer for Gauge Block Comparison, 814 ; Temper Brittleness of Boron-Treated Steels, 835 ; Electronic Calibration Centre, 852
National Coal Board, Modernisation Programme, (Plate 4, 11.1.57) ; Labour for Iron Ore Mines, 32 ; Avenue Carbonisation Plant, 44 ; Coal, Iron and Steel in 1956, 62 ; Colliery Mechanisation, 83 ; Two Colliery Reorganisation Schemes, 140, 180 ; D.C. Winder with Control Exciter at Silverwood Colliery, 182 ; Firth of Forth Road Crossing, 257 ; Sponsorship Schemes in Remploy Factories, 303 ; Railway Wagon Haulage Equipment, 307 ; Coal Miners' Bonus, 308 ; Coal, 381 ; Progress of Modernisation Plans on British Railways, 417 ; Capital Investment in Power, 420 ; Russian Coal Industry, 445 ; Inclinometers for Use in Long Underground Boreholes, 655 ; Industrial Investment, 733 ; Coal in the U.S.S.R. and in Britain, 858 ; Coal Face Mechanisation Programme, 883 ; Report, 916 ; A.C. Winders at Manvers Main Colliery, 958
National Industrial Development Corporation, Industrial Development in India, 917
National Iranian Oil Co., Abadan-Tehran Pipeline, 20
National Physical Laboratory, Internal Measuring Machine, 304 ; Changes in a 50m Mural Tape Standardising Base, 632 ; Damping Capacity, 671 ; Precision Comparator for Small Cylindrical Work, 716 ; Structural Oscillations and Fluid Flow, 839
National Research Development Corporation, Report, 481
National Rubber Machinery Company of Akron, Reinforced Plastics Factory, 841
National Union of Manufacturers' Advisory Service Ltd., New Company, 111
National Union of Mineworkers, Wage Claims, 111 ; Coal Miners' Bonus, 308
National Union of Railwaymen, Railway Wages, 189, 500, 542, 581
Naval Land Equipment Department, Wartime Excavating Machine, 396
Navalmeccanica S.A., Naples Dry Dock, 73
Neal, R. H., and Co., Ltd., Construction of the Chainat Barrage in Thailand, 448
Neale, M. J., Slightly Oiled, 159
Neptune Tanker Corporation, Oil Tanker, "Spyros Niarchos", (Plate 10, 11.1.57)
Netherlands Dock and Shipbuilding Company, Oily-Water Separation, 698
Netherlands Universities Foundation for International Co-operation, International Course in Hydraulic Engineering, 310
New, D. H., Heavy Precast Concrete Structural Work, 372
New York Shipbuilding Corporation, Cruiser "Canberra", 65
New York State Electric and Gas Corporation, Rockslide at Schoellkopf Power Station, 76
Newage (Manchester) Ltd., Standard Range of Generating Sets, 538
Newall Group Sales Ltd., Co-Ordinate Setting, (930)
Newcastle Chemical Company Pty., Ltd., Salt Production at Whyalla, South Australia, 382
Newman Industries Ltd., Drip-proof Squirrel-Cage Motors with Class-E Insulation, 343 ; Totally Enclosed Motor, 570
Newson, James, Seventy Years' Continuous Service, (548)
Niagara Mohawk Power Corporation, Rockslide at Schoellkopf Power Station, 76
Niederrheinische Hutte A.G., New Building, 812
Nilsson, Fabian, Cylinder Lock, 272
Noble, George T., Thermal Insulation of Factories, 568
Noble and Lund Ltd., Heavy Duty Planing Machine, 994
Nock, O. S., Heavy Express Locomotive Trials on the Western Region, 560, 594, (Letter, 798)
Nonius Ltd., Vernier Bevel Protractor, 273
Nonweiler, T., Optimum Sections for Bending Stiffness in Solid Construction, 16
Normalair Ltd., Portable Gas Detector, 423
Norris Brothers Ltd., Hydroplane "Bluebird", (Plate 12, 11.1.57), 474
Norris, E. T., Mechanical Strength of Power Transformers in Service, 331
Norris, K. W., The Hydroplane "Bluebird", 474
Norris, L. H., The Hydroplane "Bluebird", 474
Norris, W. G., The Chemical Inspectorate, 241
North American Aviation Incorporated, Nuclear Reactor, (Plate 15, 4.1.57) ; Research Reactor for Japan, 75 ; Sodium Graphite Reactor Electric Power Plants, 424
North-East Derbyshire Joint Water Committee, Ogston Scheme, 44
North Gloucestershire Industrial Education Council, Conference on Education for Industry, (778)
North of Scotland Hydro-Electric Board, Garry Dam, 46 ; Scottish Water Power Developments, 367 ; Dounreay Atomic Energy Establishment, 747, 784, 823
North Thames Gas Board, Annealing Plant for Collapsible Tubes, 107 ; Gas at Work in Industry, 107

North Yorkshire Shipping Company, Ltd., Ore Carrier "Redcar", 94
Northern Aluminium Company, Ltd., Aluminium Footbridge, 261 ; Aluminium Alloy Fishing Boat, 345 ; Welded Aluminium Deep Tank Hatch Cover, 379
Northern Electric Company, Ltd., Transatlantic Telephone Cable, 176
Northrop Aircraft Inc., SM-62 "Snark" Offensive Pilotless Weapon, 922
Northrup, E. P., Shortage of Engineers, 75
Nuclear Development Associates Incorporated, Penetration and Diffusion of Gamma-Rays. 193
Nuclear Development Corporation, Sodium-Deuterium Reactor, 927
Nuclear Power Plant Company Ltd., Bradwell Nuclear Power Station, 121
Nuffield Foundation, Seeing by Radio, 592
Nu-Swift Ltd., Dry Powder Fire Extinguisher, 541
Nuttall, Edmund, Sons and Co. (London) Ltd., Tunnel Under the Thames between Dartford and Purfleet, 531
Nydquist and Holm A.B., Kaplan Runners, 33 ; Diesel Shunting Locomotives for the Swedish State Railways, 272

O

Ocean Tanker Line Ltd., Oil Tanker "Atlantic Knight", 94
O.E.E.C. European Productivity Agency (E.P.A.), Conference on Nuclear Energy, 113
Office National d'Etudes et de Recherches Aeronautiques, Wide-Band Pressure Transducers ; Telemetering Flowmeter, 925
Office of Naval Research, Penetration and Diffusion of Gamma-Rays, 193
Ohio Brass Company, Surface Leakage Problems on High-Voltage Insulators, 387
Ohio Power Company, Aluminium Production in the Ohio River Valley, 427
Old, C. L., Education and Training, 581
Ontario Hydro-Electric Power Commission, Rockslide at Schoellkopf Power Station, 76
Opancol Ltd., Portable and Extendable Screw Conveyor, (508)
Optical Measuring Tools Ltd., Rotary and Inclinable Optical Indexing Table, (209) ; Precision Workshop Projector, 377
Organisation for European Economic Co-operation, Future Demand for Oil in Western Europe, 112 ; European Free Trade Area, 239
Orr, J. G., Professional Engineers, 420 ; Status of Engineers, 446
Otago Harbour Board, Tug "Otago", 94
Otto Suhner G.m.b.H., High-Speed Disc Grinder, 964
Overseas Tankship (U.K.) Ltd., Oil Tanker "Caltex Edinburgh", (Plate 10, 11.1.57)

P

Pacific Steam Navigation Company, Liner "Reina del Mar", (Plate 9, 4.1.57), 94
Page, G. L., Manufacturers' Advisory Service 111
Paglialunga, L., Aluminium-Tin Bearings, (402)
Palm Line Ltd., Cargo Vessels, "Bamenda Palm", "Badagry Palm", 94
Palmer, S. J., Education and Training of Naval Architects and Marine Engineers, 253
Parkinson and Cowan Industrial Products, Radiant Heat Tunnel, 107
Parkinson and Cowan Ltd., Top Management, 733
Parkinson Howard Ltd., Volta River Project, 20
Parkinson, Sir Lindsay, and Co., Ltd., Lancaster By-pass, 935
Parry, C., Construction of Secondary Treatment Plant at the L.C.C.'s Northern, Outfall, 610
Parsons, C. A., Australia Ltd. Salt Production at Whyalla, South Australia, 382
Parsons, C. A., and Co., Ltd., New Factory, 5 ; Blyth Substation, 9 ; Turbine for the North British Coal-burning Locomotive ; Generator at Dunston Power Station, 26 ; Indirect-Fired Gas Turbines, 210 ; Electrical and Allied Plant, 335
Parsons Engineering Company, Ltd., Gear Pumps and Marine Reverse Gears, 102 ; Aluminium Alloy Fishing Boat, 345
Partridge Wilson and Co., Ltd., Electrical Engineers Exhibition, 570
Paterson Hughes Eng. Company Ltd., Dounreay Atomic Energy Establishment, 747, 784, 823 ; Anti-Bridging Device for Storage Hoppers, 985
Paton, J., Civil Engineering Contributions to Shipbuilding, 513
Pattison, J. R., Atomisation of Water by Spinning Discs, 514
Pearl Controls Ltd., "Junopilot" Safeguard Control, and Bridging Ladder Burner, 107
Peebles, Bruce, and Co., Ltd., Dounreay Atomic Energy Establishment, 747, 784, 823
Penfold and Partners, Portable Cold Storage Room (499)
Peninsular and Oriental Steam Navigation Company, 45,000-ton Liner for Australian Service, 185
Percival, Edgar, Aircraft Ltd., "E.P.9" Agricultural Aircraft, (304)
Perdeck Solder Products Ltd., Stainless Steel Soldering, (892)
Perkins, F., Ltd., Mark P3(M) and Mark P6(M) Engines, 102 ; Apprentice Training Scheme, (148)
Permutit Company, Ltd., Portable Water Purifying Plant, (664)
Petbow Ltd., Airfield Power Unit, (276)
Petroleum Information Bureau, Petroleum Consumption, (276)
Petters Ltd., Petter-Mclaren "PD4M" Diesel Engine, 102 ; Higher Speed Diesel Engines, 911
Pfeil, L. B., Refining and Using Nickel, 720
Philadelphia Electric Company, Eddystone Steam Power Station, 736, 774
Philip and Son, Ltd., Tug "Takoradi", 94
Philips Electrical Ltd., A.C. Voltage Stabilisers, 571 ; 5MeV Linear Accelerator for Industrial Radiography, 654 ; Monitoring Vibration Instrument, 766
Philips Research Laboratories, Magnetic Dynamic Gramophone Pick-Up, 191 ; Musical Instrument for Deaf-Mute Children, 622
Phoenix-Rheinrohr A.G., Continuous Mill, 504 ; Television Equipment for Testing Welded Pipes, 772
Phosphor Bronze Company, Ltd., Birmingham Factory Extension, 859
Photostress, "Model PC/Z" and "Model GC/Z" Photo-Elastic Equipment, 925
Picken, J. A., The Chew Stoke Reservoir Scheme, 783
Piling and Plant (Kent) Ltd., Footbridge at Eel Pie Island, 261
Pilkington Brothers Ltd., High-Voltage Laboratory, 56
Pilling, W. H. C., Nuclear Energy in Great Britain, 937
Pingon Tower Cranes Ltd., Self-Erecting Climbing Crane, 805
Pinner, W. G., and Co., Instrument for Perspective Drawing, 273
Pintsch-Bamag A.G., Spherical Gasholder, 73 ; Heavy Water Separation Process, 503
Pitt, Charles, (Bartop Stacey), Ltd., Portable Sawmill for Canada, 576
Plenty and Son, Ltd., Tug "Takoradi", 94 ; Easily Cleaned Rotary Pumps, (413) ; Oil and Chemical Filter, 460
Plessey Nucleonics Ltd., Detection System, 55
Plessis, D. H. C. du, Railway Works in South Africa, 919
Plowman, J. M., Compaction of Concrete by Vibration, 830
Pohlig, J., Aktiengesellschaft, Blast-Furnace Charging, 771
Pollard, E., and Co., Ltd., Teaching Device for Royal Navy, 413
Port of London Authority, Berth at Tilbury Docks, 973
Porto Alegre Compania Naviera S.A., Oil Tanker S.S. "Panaghia", 94
Posford Pavry and Partners, Ford Modernisation and Expansion Scheme, 650
Potts, H. P., Machine Tool Trades Association, (548)
Poultney, E. C., Some Fairbairn Locomotives, 305 ; Diesel Railway Traction, 568 ; Locomotive Trials—Western Region, 798 ; Churchward's Locomotives : The Origin of Species ? 944
Powell-Duffryn Carbon Products Ltd., Ejectors for Corrosive Fluids, (276)
Powell, J. Enoch, National Institute for Research in Nuclear Science, 281
Power Frequency Heating Ltd., Engine Starting Aid, 847
Power Gas Corporation Ltd., Dounreay Atomic Energy Establishment, 747, 784, 823 ; Extensions to a Stockton Works, 880
Premier Oil Burners, Self-Proportioning Oil Burner, 380
Press Guards Ltd., Automatic Control Device for Press Operation, 188
Press, William, and Son, Ltd., Progress of the Metropolitan Water Board's New Works in 1956, 186
Pressed Steel Company, Ltd., New Factory, 372
Prince Line Ltd., Liner "Norman Prince", (Plate 10, 4.1.57)
Process Equipment Industries Inc., Surface Leakage Problems on High-Voltage Insulators, 387
Procter and Gamble, Research Headquarters of Detergent Factory, 956
Production Tool Alloy Company Ltd., Carbide Tool for High Tensile Metals, 539
Pye Ltd., Dounreay Atomic Energy Establishment, 747, 784, 823
Pye Telecommunications Ltd., Electronic Megaphone, 228
Pyrene Company Ltd., Extinguisher for Metal Fires, (221) ; Fire Extinguisher (854)

Q

Qatar Petroleum Company, Proposal for a Cement Works in Qatar, (452)
Quebec Hydro-Electric Commission, Canadian Water Power, 161
Quest-Aviation, Societe Nationale de Constructions Aeronautiques, "Trident 11" Interceptor, 16
Q.V.F., Ltd., Industrial Glass Pipelines, 415

R

Radio Industry Council, Electrical Engineering Training, 161
Radley, Sir Gordon, Presidential Address, 55 ; Transatlantic Telephone Cable, 159, 176 ; Institution of Electrical Engineers, 357
Rafique, O., Refractory Nozzle Blades for High-Temperature Gas Turbines, 251
Rambush, N. E., Obituary, 783
Rankin, John, Steel for Shipbuilding, 462
Ranking Company, Surveys for Engineering Development in British Columbia, (493)
Ransome and Marles Bearing Co., Ltd., Wartime Excavating Machine, 396
Ransomes and Rapier Ltd., Walking Dragline, (Plate 9, 11.1.57)
Ransomes, Sims and Jefferies Ltd., Self-Propelled Combine-Harvester, (Plate 8, 11.1.57)
Rapid Magnetic Machines Ltd., Coolant Separator, 881
Ratcliff, G., Scientific Investigation of the Upper Atmosphere, 342
Reaktor A.G., Research Company, 33
Reavell and Co., Ltd., High Pressure Air Drying Equipment, 70 ; Diesel-Electric Paddle Tugs for the Navy, 486
Reddish, Halford, Comment on Strikes, 695
Redifon Ltd., Teaching Device for Royal Navy, 413
Reed and Mallik Ltd., Footbridge at Eel Pie Island, 261
Reed Paper Group, Opening of Wadding Mill, 669 ; Cellulose Wadding Mill at Aylesford, 875
Rees-Davies, W. R., Industrial Accidents, 916
Reid, W., Russian Coal Industry, 445
Reliance Rubber Company Ltd., Precision Mechanical Rubber Mouldings, (276)
Remploy Ltd., Sponsorship Schemes, 303
Renault Ltd., Test Car "Dauphine", (Plate 6, 11.1.57) ; "Etoile Filante", (Plate 12, 11.1.57)
Rendel, Palmer and Tritton, Abadan-Tehran Pipeline, 20 ; Lightship "Flame", 94 ; Frodingham-Scunthorpe Footbridge, 372 ; Second Stage of the Neath By-Pass, 473
Renold Chains Ltd., Wartime Excavating Machine, 396
Research Engineers Ltd., Teaching Device for Royal Navy, 413
Reuttener Textilwerk A.G., Water Turbine for 1200kW Generator, 734
Reveirs, George, Ltd., Seventy Years' Continuous Service, (548)
Reyrolle, A., and Co., Ltd., 11kV Air-break Switchgear, 536 ; Dounreay Atomic Energy Establishment, 747, 784, 823
Rheinisch-Westfalisches Elektrizitatswerk A.G., 15MW Nuclear Power Station for West Germany, 575 ; Large Mobile Transformer, 622 ; German Nuclear Power, 773
Rhoden Partners Ltd., Automatic Feeding Equipment for Nut Welding Machine, 767
Richards, George, and Co., Ltd., Heavy-Duty Planing Machine, 577
Richardson, E. and F., Ltd., Corrosion-Resistant Paints, 461
Richardson, Westgarth and Co., Ltd., Nuclear Power Equipment, 5 ; Oil Tanker S.S. "Panaghia", 94
Rickover, H. G., Conventional Aspects of Nuclear Power, 520
Rider, F., Initial Volume of Accessions, 90
Riemsdijk, J. T. van, French Locomotive Experiences, 138
Rinaldi, R. C., and Partners, Aluminium Grandstand Roof, 579
Road Research Laboratory, Experimental Road Construction at Alconbury Hill, 44
Robb, A. M., Education and Training of Naval Architects and Marine Engineers, 253
Robb, Henry, Ltd., Dredger "Samuel Armstrong", (Plate 11, 11.1.57) ; Dredgers "Samuel Armstrong", and "Annahda", "Kumallo", "Kaimai", "Kaitoa", Cargo Vessels, 94
Roberts, Gilbert, Firth of Forth Road Crossing. 257
Robertson, Sir Brian, British Railways in 1956, 28 ; Improvement of River Trent Navigation. (508)
Robertson Thain Ltd., The "Jaguar" Fire, 408
Robins Conveyors and Jeffrey-Galion, Open Pit Working Contracts For Nchanga, 383
Robinson, T. R., Huyghens Tercentenary Exhibition, 87 ; New Tower Clock at Malmesbury Abbey Church, 124
Robinson, Thomas, and Son, Ltd., Finnish Flour Mill, 309
Robson, L. S., The Contribution of the Turbo-Alternator Manufacturers to Technical Advancement and to the National Economy, 978
Rochester Gas and Electric Corporation, Rockslide at Schoellkopf Power Station, 76
Rolls-Royce Ltd., "Avon" Engines, (Plate 6, 4.1.57), 12;26; "Conway R.C.o.5",Gas Turbine; "R.B.108" Gas Turbine; "R.M.60" Marine Engine, 26 ; Formation of a New Atomic Group, 49 ; "Conway" Engines, 53; Indirect-Fired Gas Turbines, 210 ; Fairey "Delta 2", 297; Nuclear Machinery for Submarine, (390); Applications of Oil Engines, 769 ; Civil and Military Development, (1004)
Room, G. H., An Industrial Application of Computers, 368
Rose, H. E., Gear Failures of Ball, Tube and Rod Mills, 522 ; Flow of Suspensions of Non-Cohesive Spherical Particles in Pipes, 898, 939
Ross, Donald, and Partners Ltd., Tilting Turning Rolls for Welding Cylindrical Work, 110
Rotax Ltd., High Pressure Air Drying Equipment, 70
Rotol Ltd., Applications of Oil Engines, 769
Round Oak Steel Works Ltd., Centenary, 984
Rover Co., Ltd., Rover "T.3", 26 ; Higher Speed Diesel Engines, 911 ; 2-Litre Diesel Engine, (953)
Rowan, David, and Co., Ltd., Oil Tanker "Atlantic Knight", 94
Roxane, Philips, Computer Production of Trade Names, 503
Roxbee, Sir Harold, Developing Technical Education, 433
Royal Aircraft Establishment, Scientific Investigation of the Upper Atmosphere, 342 ; Exhibition of the Physical Society, 494 ; Wind Tunnels, 986
Royal Bank of Scotland, Scottish Industry, 229
Royal Dutch Shell Group, Oil Refinery for Turkey, (702)
Royal Mail Lines Ltd., M.V. "Eden" ; M.V. "Tuscany", 94
Royal Mail Steam Packet Company, Ltd., Twin Screw Tug "Atherfield", (Plate 11, 11.1.57)
Royal Ordnance Factory, "Nero" Experimental Low-Energy Reactor, 499
Royce Electric Furnaces Ltd., Double Chamber Electric Furnace, 99 ; Assay Furnace, (664)
Ruberoid Ltd., Dounreay Atomic Energy Establishment, 747, 784, 823
Rubert and Co., Ltd., Surface Finish Measuring Instrument, 348
Rugby Portland Cement Company, Ltd., Machine Tool Trades Association, (548) ; Comment on Strikes, 695
Ruhrpumpen, G.m.b.H., Boiler Feed Pump, 773
Rural Industries Bureau, Country Industries Exhibition, (702)
Russell, Alexander, Scholarships at Faraday House, (740)
Russell, Sir Gordon, Industrial Design, 897
Ruston-Bucyrus Ltd., Wartime Excavating Machine, 396 ; Construction of the Chainat Barrage in Thailand, 448
Ruston and Hornsby Ltd., "TA" Turbo-Alternators, 26 ; 2YBM and 4YCM Engines, 102 ; Power Station at Williamson Diamond Mines, 373 ; Diesel-Mechanical Shunting Locomotive, 419 ; Construction of the Chainat Barrage in Thailand, 448 ; Air-Cooled Oil Engine, 499 ; Tunnel Under the Thames between Dartford and Purfleet, 531 ; Gas Turbine Power Station, 618 ; Internal Combustion Research Centre, 761; Centenary, 983
Rylands Brothers Australia Proprietary Ltd., Australian Wire Weaving Industry, 382
Rylands, J. R., Institute of Marine Engineers' Annual Dinner, 395 ; Fuel Efficiency, 687
Ryley, Denis J., Supersaturation in Steam Expanding from a Low Initial Quality, 708

S

S.A. Rochar Electronique, Frequency Meter-Chronometer, 924
Saben, Hart and Partners Ltd., "Nero" Experimental Low-Energy Reactor, 499
Safety in Mines Research Establishment, New Laboratory, 731 ; Flame Suppression, 60
Safranek, W. H., Properties of Electrodeposits at Elevated Temperatures, (587)
Saguenay Terminals Ltd., S.S. "Sunrip", 307
Salem Engineering Company, Ltd., Dee Scheme, 44
Salmon, John, Engineering Company, Ltd., Sugar Beet Harvester (Plate 8, 11.1.57)
Salzgitter Maschinen A.G., Tubular Drill Mast, 811 ; Bunker Train for Mines, 999
Samuely, F. J., Building Frame and the Steel Shortage, 286
Sanders, R., Heavy Precast Concrete Structural Work, 372
Sanders and Forster Ltd., Standard Steel Buildings of Large Span, 261
Sargent and Lundy, Experimental Boiling Water Reactor at the Argonne National Laboratory, 623, 661, 699
Saunders, Professor, Slightly Oiled, 159
Saunders-Roe Ltd., "Princess" Flying Boats, 53 ; S.R.53 Research Aircraft First Flight, 809
Savage, A. N., Developments in Marine Electrical Installations with particular reference to A.C. Supply, (619)
Savage and Parsons Ltd., Oscillographic Recording on British Railways, 375; Remote Operation and Observation, 377 ; Dounreay Atomic Energy Establishment, 747, 784, 823 ; Metal Shelving, (1004)
Sayers, J., Scientific Investigation of the Upper Atmosphere, 342
Scaffolding (Great Britain) Ltd., Footbridge at Eel Pie Island, 261 ; Aluminium Grandstand Roof, 579
Schaer, G. R., Properties of Electrodeposits at Elevated Temperatures, (587)
Schiess-Defries Hebezeug und Kranbau G.m.b.H., Light Construction Crane Crab, 811
Schlaepfer, George L., T.V.A. Costs and Prices, 722
Schoelmann Aktiengesellschaft, Solid Wheel and Disc Mill, 347
Schriever, Bernard A., Missile Development Programme, 813
Scott, James, and Co., Ltd., Dounreay Atomic Energy Establishment, 747, 784, 823
Scott and Wilson, Kirkpatrick and Partners, Passenger and Cargo Building at Southampton, (Plate 2, 4.1.57) ; Planning of Hong Kong Airport, 357
Scottish Shire Line Ltd., Liner "Argyllshire" (Plate 10, 4.1.57)
Scottish Machine Tool Corporation, Ltd., British Industries Fair, 684
Scott's Shipbuilding and Engineering Company, Ltd., Oil Tanker "Caltex Edinburgh", (Plate 10, 11.1.57) ; Cargo Liner "Nyanza", 23 ; H.M.S. "Puma", 29 ; Cruiser "Defence", 65, (196)
Scovil, D., Solid-State Oscillator for Microwave Frequencies, 389
S.E.F.R.A.M., String Oscillograph, 925
Seidel, H., Solid-State Oscillator for Microwave Frequencies, 389
Self-Changing Gears Ltd., Electric Gear Selection, 106 ; Automatic Gear Changing on Diesel Railcars, (980)
Semtex Ltd., Corrosion-Resistant Paints, 461
Serck Radiators Ltd., Wartime Excavating Machine, 396
Servomex Controls Ltd., Low-Frequency Waveform Generator, 767
Seymour, Robert, Dollar Exports, 848
Sharples Centrifuges Ltd., Air Vortex Classifier for Dry Powders, 378 ; New Factory, (968)
Shelbourne, John, and Co., Ltd., New Jetty at Coryton Refinery, 379
Shell Chemical Company, Ltd., Plastic Pipe Development, 881
Shell-Mex and B.P., Ltd., Factory Equipment Exhibition, 593 ; Film of Air Travel, (702)
Shell Petroleum Company, Ltd., Sedimentology Laboratory, (236); Vacation Training Courses, (428) ; Developments at Stanlow Refinery, 728 ; Gamma Radiation Laboratory for Lubricants, 877
Shell Tankers Ltd., Oil Tankers "Horomya", "Harvella", S.S. "Voia", S.S. "Volvula", 94
Shell Thornton Research Centre, Gamma Radiation Laboratory for Lubricants, 877
Shepcote Lane Rolling Mills Ltd., Titanium in the Aircraft Industry, 295
Shepheard, Sir Victor, Structural Steels for Warship Building with Some Notes on Brittle Fracture, 526
Sheppard, A. W., Contour Etching, 98
Sheppard, P. A., Scientific Investigation of the Upper Atmosphere, 342
Shin-Mitsubishi Jyuko Company, Japanese Destroyer, "Yukikaze", 92
Shipbuilding Conference, Statistics, (252) ; Shipbuilding Statistics, (731)
Shipbuilding Employers' Federation, Engineering and Shipbuilding Wages, 399, 542 ; Shipbuilding and Engineering Disputes, 462 ; Shipbuilding Wages, 916
Short Brothers and Harland Ltd., Analogue Computer, (Plate 7, 11.1.57) ; "Seamew" Anti-Submarine Aircraft, 49 ; Reamers for High-Tensile Steels, 99 ; Fatigue Laboratory, (276) ; Rubber Pressing Refinement, 380 ; Patent No. 757,859, (468) ; Research Aircraft, (588) ; Analogue Computer ; Servo-Controlled Rocking Table ; Electro-Hydraulic Servo-Mechanisms, 725
Siegener A.G., New Building, 697, 812
Siemens-Ediswan Research Laboratories, Translator for Telephone Applications, 494
Siemens and General Electric Railway Signal Company, Ltd., Electrification of Southend (Victoria) Line, 68 ; Dual Point Controller, 379
Siemens und Halske Aktiengesellschaft, Facsimile Telewriter ; Railway Signalling Equipment, 771
Siemens-Schuckert Bau-Union A.G., Geesthacht Pumped Storage Scheme, 543

Figures in Brackets ( ) refer to paragraphs

Siemens-Schuckertwerke, Compound-Wound Three-Phase A.C. Motor. 380kV Surge Arrester, 232 ; Geesthacht Pumped Storage Scheme, 543 ; 15MW Nuclear Power Station for West Germany, 575

Siempelkamp, G., and Co., Large Press for Aircraft Construction, 545

Sigmund Pumps Ltd., Construction of the Chainat Barrage in Thailand, 448

Sikorsky Aircraft Division of United Aircraft Corporation, "Sikorsky S.56" Twin-Engined Helicopter, 26 ; Sikorsky "S.58" Helicopter, 846

Simmonds Aerocessories Ltd., Dounreay Atomic Energy Establishment, 747, 784, 823

Simon, Sir Francis, Fortieth Guthrie Lecture, (99)

Simon-Carves Ltd., Hams Hall "C" Power Station, 9 ; Baum Washery, 140 ; Reorganisation of Bold Colliery, 180 ; Scotland's First Nuclear Power Station, 216, 260 ; Continuous Slagging Boiler for Padiham Power Station, (626) ; Steel Works Coking Plant in Middlesbrough, 727

Simons, William, and Co., Ltd., Diesel-Electric Paddle Tugs for the Navy, 486

Simplex Wire and Cable Corporation, Transatlantic Telephone Cable, 176

Simpson, T. F. B., Diesel Locomotive Building and Maintenance, 472

Sinex Engineering Company, Ltd., Batch Counting and Mixing Equipment, (854)

Sinterlite Ltd., Concrete Aggregates from Fly Ash, 707

Smith, C. H. Chichester, The Air Speed Record, 174

Smith-Clarke, G. T., Award of the James Clayton Prize, 121

Smith, Commander, Refractory Nozzle Blades for High-Temperature Gas Turbines, 251

Smith, Sir Ewart, Mechanical Engineers and Clean Air, 328

Smith, Ewen H., (Obituary, (352)

Smith, F., and Co. (Whitworth) Ltd., Fluid Bed Technique for the Textile Industry, 651

Smith, John, and Sons, New Tower Clock at Malmesbury Abbey Church, 124

Smith, N. C. Strother, Fire Hazards of Roof Coverings, 836

Smith, Sir Reginald Verdon, Cost Stability, 770

Smith, S. L., Research and Development, 60

Smith, S. Morgan, Company, High-Head Turbine Test Stand, 153

Smith, Shirley, Firth of Forth Road Crossing, 257

Smith, Sir William Verdon, Obituary, 281

Smith's Dock Company, Ltd., Oil Tanker "San Felipe", (Plate 10, 11.1.57) ; Trawler "Portia" ; M.V. "Crystal Jewel" ; Ore Carrier "Redcar", 94 ; Oxygen-Cutting Equipment for Ship's Deck Beams, 253

Smith's Industrial Instruments Ltd., Electrical Engineers Exhibition, 571

Snyder Tool and Engineering Company, Automation in 1957, 585

Societe Alsacienne de Constructions Mecaniques, Diesel Engines for Moroccan Railways, 230

Societe Alsthom, Railcars for Moroccan Railways, 230

Societe Ansaldo, Swedish American Liner "Gripsholm", 963

Societe Entrepots, Abadan-Tehran Pipeline, 20

Societe Francaise d'Entreprises de Dragages et de Travaux Publics, Planning of Hong Kong Airport, 357

Societe Industrielle de Minerais de l'Ouest (S.I.M.O.), Uranium Concentrates Factory, 33

Societe Nationale de Chemins de fer Francais, French Experimental Railcar, 584 ; French Railways' Modernisation Plan, 621

Societe Nationale de Constructions Aeronautiques du Nord, "Griffon" Interceptor, 16 ; "Noratlas" 2502 Aircraft ; "Gerfaut" Delta Aircraft, 884 ; Remote Controlled Target Plane "CT-20", 922

Societe Nationale d'Etude et de Construction de Moteurs d'Aviation, "Flying Atar" C-400 P-2 Vertical Take-off Aircraft, 922

S.N.C.A.N., Ram Jet "Griffon 02", 999

S.N.E.C.M.A., Turbo-jet Engine "Atar 9", 923

Societe Pechiney, Germanium Rectifiers in Industry, 55

Societe Potasse et Engrais Chimiques (P.E.C.), Uranium-Thorium Ore Factory, 33

Soderfors Bruk, Ceramic Cutting Tools, 888

Soil Mechanics Ltd., Tunnel Under the Thames between Dartford and Purfleet, 531

Soiltest Inc., Soil Testing Manual, (547)

Solar Aircraft Company, "Hydrospin" Machine for Forming Jet Engine Parts, 275 ; Fighter Policy, 279

Solartron Electronic Business Machines Ltd., Electronic Reading Automaton, 414

Solartron Electronic Group Ltd., Portable Metal Sorter and Resistivity Test Set, 188

Sopwith, D. G., Unification of Screw Thread Practice, 793

South African Railways, Spacing of Railway Sleepers, 227

South American Minerals and Products Company, Ltd., Industrial Floor Coating, (156)

South Durham Steel and Iron Company, Ltd., Steel Export Policy, 72 ; N.E. Coast Steelworks Development, 542

South-Eastern Gas Board, Gas at Work in Industry, 107

South of Scotland Electricity Board, Nuclear Power Station, 5 ; Commissioning of New Plant in 1956, 70 ; Scotland's First Nuclear Power Station, 216, 260 ; Engineering Problems in the Application of Nuclear Energy, 282, 320 ; Scottish Water Power Developments, 367

South Wales Switchgear Ltd., Synthetic Fluids for Transformer Cooling, 451

Southern Forge Ltd., Stretching and Detwisting Machine for Extruded Sections, 958

Southern Instruments Ltd., Torsional Vibration Pick-up, 494

Southern Metalife Ltd., Rust Protection of Steel Chimneys, (468)

Southern Portland Cement Ltd., Development and Growth of the Australian Steel Industry, 501

Southern Region of British Railways, Oscillographic Recording, 375 ; Diesel-Electric Trains, 732

Southern United Telephone Company, Ltd., Transatlantic Telephone Cable, 176

S.p.A. Cambi Idraulici Badalini, Hydrostatic Gearbox, 113

Spillingwerk Hamburg, Heating and Power Plant, 697

Spillman, Dr. Ing. W., Closed Cycle Air Turbine for Naval Use, 995

Square D, Ltd., Electrical Engineers Exhibition, 570

Standard Motor Co., Ltd., Industrial Gas Turbine, 406

Standard Telephones and Cables Ltd., Transatlantic Telephone Cable, 55, 176 ; Automatic Position Plotting, 344 ; Caesium Clock, 494 ; Power Transformers, 572

Stanier, Sir William, Award of Gold Medal, 473

Starks, H. J. H., Toll Roads in the U.S.A., 288, 323

Startrite Sales Ltd., Band Saw Butt Welder, 851

Steel Company of Wales Ltd., Germanium Rectifiers in Industry, 55 ; Temper Mills at the Trostre and Velindre Works, 182 ; Progress of Modernisation Plans on British Railways, 417

Steel, Peech and Tozer, Continuous Gauging of Hot-Rolled Steel Strip, 573 ; Production of Steel, (664)

Stein and Atkinson Ltd., Portable Sawmill for Canada, 576

Stenners of Tiverton Ltd., Portable Sawmill for Canada, 576

Stephen, Alexander, and Sons, Ltd., Cargo Ship "Kaituna" (Plate 10, 4.1.57) ; H.M.S. "Murray", 29 ; M.V. "Crux", 94

Stevenson, Bert, Obituary, (352)

Stevenson, Doctor, Refractory Nozzle Blades for High-Temperature Gas Turbines, 251

Stewarts and Lloyds, Wirksworth Testing Station, (Plate 6, 11.1.57)

Stirling Astaldi (West Africa) Ltd., Volta River Project, 20

Stokes, F. J., Corporation, Large Vacuum Impregnator for the Pakistan Railways, 701

Stone, J., and Co. (Charlton) Ltd., Dounreay Atomic Energy Establishment, 747, 784, 823

Stone Chance Ltd., Lightship "Flame", 94 ; Perotan Island Lighthouse, 226

Storey, J. M., Mission to Canadian Oilfields, 770

Strachan and Henshaw Ltd., Dounreay Atomic Energy Establishment, 747, 784, 823

Strauss, Lewis L., Tenth Anniversary of the U.S. Atomic Energy Commission, 311

Stuart, J. K. S., Hydrokinetic Fluid Drives, 104

Submarine Cables Ltd., Transatlantic Telephone Cable, 55, 176

Sud-Aviation, "Vantour" All-Weather Fighter, 884 ; SO. 1221 "Djinn" Helicopter, 923 ; S.E.3130 "Alouette II" Helicopter, 923

Sud-Est Aviation, Societe Nationale de Constructions Aeronautiques, "Durandal" Defence Interceptor, 16 ; Jet Airliner "Caravelle", 53 ; Jet Transport Aircraft "SE210" Caravelle, 922

Suez Canal Company, The Channel Tunnel, 717

Sugar Line Ltd., Sugar Carrier "Crystal Gem" ; M.V. "Crystal Jewel", 94

Sulzer Brothers, Eddystone Steam Power Station, 736

Summers, John, and Sons, Ltd., Steel Demand, 189

Sumner Sollitt Company, Experimental Boiling Water Reactor at the Argonne National Laboratory, 699

Sumo Pumps Ltd., Submersible Drainage Pump, 304

Sunvic Controls Ltd., Analogue Computer, 376

Sutcliffe, Richard, Ltd., Articulated-Steel-Plate Conveyor, 345

Sutherland, Alex., Ltd., Dounreay Atomic Energy Establishment, 747, 784, 823

Svenska Aeroplan A.G. (S.A.A.B. Aircraft Co.), "J.35" Double-Delta Aircraft, 16 (Plate 13, 4.1.57)

Swan, Hunter and Wigham Richardson Ltd., Passenger Liner, "Bergensfjord", 23 ; H.M.S. "Pellew", 29 ; Cruiser "Defence", 65 ; Cargo Liner "Michael C" ; Cargo Vessels, "Bamenda Palm", "Badagry Palm" ; Ore Carrier "Ruth Lake" ; Liner "Bergensfjord" ; Oil Tanker S.S. "Volvula", 94 ; Cathodic Protection, (236) ; Heavy Plate Levelling Machine, 460 ; Dry Dock at Wallsend, 801

Swedish American Line, Liner "Gripsholm", 963

Swedish State Power Board, Nuclear Programme, 33

Switchgear Testing Company, Ltd., 400kV Power Transformer, 845

Sword, D. H., Ship Repairing, (508)

Sykes, Henry, Ltd., Centenary, 984

Sykes Machine Tool Company, Ltd., Duplex Quenching Press, 232 ; Hob Testing Machine, 385 ; Gear Deburring Machine, 386 ; Hobbing Machine for Small Cyclo-Palloid Bevel Gears, 545

Sykes, W. E., Ltd., Gear Cutting Film, (617)

Sylvania-Corning Nuclear Corporation, International Atomic Exposition at Philadelphia, 965

Synchronome Company Ltd., Shortt Free Pendulum Clock, 87

Syndicat General des Fondeurs de France, International Pressure Die Casting Conference, 698

T

Talbot Steel Tube Co., Ltd., Steel Tubes and Bars, (993)

Tangyes Ltd., Tunnel Under the Thames between Dartford and Purfleet, 531

Tarmac Ltd., Lancashire's Road Plan, 20 ; Longton By-pass Road, 840 ; Meriden By-pass, 935

Tarrant, J., Slide Rule for Hydraulic Calculations, 135

Tata Engineering and Locomotive Works, Five-Ton Mains-Frequency Coreless Induction Furnace, 490

Tata Iron and Steel Company, Industrial Development in India, 917

Taylor, G. V., Leicestershire Work Study Group, (532)

Taylor, George, and Co., Ltd., Teaching Device for Royal Navy, 413

Taylor-Short and Mason Ltd., Cellulose Wadding Mill at Aylesford, 875

Taylor Woodrow Ltd., The "Turnkey" Contract, (892)

Taylor Woodrow (Building Exports) Ltd., Dounreay Atomic Energy Establishment, 747, 784, 823

Technical Design and Tool Company, Ltd., "Nero" Experimental Low-Energy Reactor, 499

Technical and Scientific Packers Ltd., Teaching Device for Royal Navy, 413

Technograph Electronics Products Ltd., British Industries Fair, 684

Teddington Industrial Equipment Ltd., Indicating Controller, 107 ; Large Capacity Solenoid-Operated Valves, (532)

Telefunken, German Loudspeaker System at Paris Opera, 464

Telfer, E. V., Education and Training of Naval Architects and Marine Engineers, 253, 280

Tellurometer (Pty.) Ltd., Surveying Instrument for the Precise Measurement of Length, 538

Tennessee Valley Authority, Hiwassee Dam, 76 ; Progress, 455, 505, 546

Terrell, B. J., Refractory Nozzle Blades for High-Temperature Gas Turbines, 251

Texas Gulf Sulphur Company, Sulphur Recovery Plant, (236)

Thain, C., The "Jaguar" Fire, 408

Thermic Equipment and Engineering Ltd., Heating Furnace, 107

Thermotank Ltd., Keeping Ships' Decks Free from Funnel Gases, 60 ; Dounreay Atomic Energy Establishment, 747, 784, 823

Thomas, N. G. H., Synthetic Fluids for Transformer Cooling, 410, 451

Thomas, Richard, and Baldwins Ltd., Ebbw Vale Works, (Plate 5, 11.1.57) ; Germanium Rectifiers in Industry, 55

Thompson, John, Ltd., Heat Exchanger, (Plate 3, 11.1.57) ; Tilbury "A" Power Station, 9 ; Berkeley Nuclear Power Station, 143 ; Dounreay Atomic Energy Establishment, 747, 784, 823

Thompson, John, Group, Research Reactor, 5

Thompson, John, Instrument Company, Dounreay Atomic Energy Establishment, 747, 784, 823

Thompson, John, Kennicott, Ltd., Dounreay Atomic Energy Establishment, 747, 784, 823

Thompson, John, Water Tube Boilers Ltd., Dounreay Atomic Energy Establishment, 747, 784, 823

Thompson, R. C., Presidential Address, 23

Thomson, Thomas, Obituary, (778)

Thornycroft, John I., and Co., Ltd., Gas Turbines and Diesel Engines, (Plate 5, 4.1.57) ; "Scillonian", (Plate 11, 11.1.57) ; Twin Screw Tug "Atherfield", (Plate 11, 11.1.57) ; Seagoing Motor Cruiser, and Mark R.T.R. 4/D1 Engine, 102 ; High-Speed Passenger Launch, 224

Thrissell Engineering Company, Ltd., Mechanised Sorting Equipment for the Post Office, 688

T. I. Aluminium Ltd., Aluminium Welded Tubing, (Plate 4, 4.1.57) ; Seam-Welded Aluminium Tubing, 268

Tide Water Associated Oil Company, Large Oil Tanker "George F. Getty", 545

Tileman and Co., Ltd., Dounreay Atomic Energy Establishment, 747, 784, 823

Timber Development Association Ltd., Uses of Timber, (588)

Times, The, New Journal "Technology", (375)

Tinsley, H., and Co., Ltd., Work Sampling Techniques in Work Study, 245

Tirfor Ltd., Winch for Scaffolding Cradles and Bosuns' Chairs, 769

Tomlinsons (Rochdale) Ltd., Fluid Bed Technique for the Textile Industry, 651

Tool Treatments (Chemicals) Ltd., Plastics Products, (833)

Toon, John, and Partners Ltd., Synthetic Rubber Plant, 222

Towler Brothers (Patents) Ltd., Hydraulic Lock at High Pressure, 554

Townes, C. H., Solid-State Oscillator for Microwave Frequencies, 389

Tracons Ltd., Light Alloy Containers for Goods Transport, (437)

Tramp Chartering Corporation of Panama, Cargo Liner "Capetan Cardamilltis", 61

Transport and General Workers' Union, Wage Claims, 111

Travers, R., Morgan and Partners, Progress of the Clifton Bridge, Nottingham, 872

Treasury, Export Requirements, 381 ; Industrial Production, 542 ; Industrial Investment, 733 ; Costs and Prices, 883

Trend Industrial Equipment Ltd., Universal Swivel Vice or Table, 985

Trinidad and Tobago Fire Service, Two Fire-Fighting Tenders, 498

Tripp, G. W., Motor Vessel "Essex Ferry", 171 ; Motor Ship "Scottish Coast", 403 ; Diesel-Electric Paddle Tugs for the Navy, 486

Triumph Engineering Co., Ltd., 650 c.c. Engine "Thunderbird", (Plate 12, 11.1.57)

Tube Investments Ltd., Irradiation Laboratories, 55 ; Electrical Instrumentation, 55

Tucker, O. R., Committees, 174

Tuplin, W. A., George Jackson Churchward, 254, 368 ; Terminology in Gearing, 569 ; Trials on the Western Region, 682 ; Let's Forget the Cycloid Tooth, 722 ; Locomotive Trials-Western Region, 836 ; Permissible Backlash Between Gear Teeth, 951

Tupolev, Andrei Nikolaevich, Russian Jet Airliner "TU-104", 53

Turbine Gears Ltd., Wartime Excavating Machine, 396

Turner Brothers (Birmingham) Ltd., British Industries Fair, 684

Turner, Stuart, Ltd., Mark H2MR Diesel Engine, 102

Twiss, L.P., The Fairey "Delta 2", 297

U

Ubbelohde, A. R., "Combustion and Flame" New Journal, (527)

Uganda Electricity Board, Programme, (588)

Unifin Tube Company, Indirect-Fired Gas Turbines, 210

Union Carbide and Carbon Corporation, Nuclear Research Centre, 929

Union Steam Ship Company of New Zealand Ltd., Cargo Ship "Kaituna", (Plate 10, 4.1.57) ; "Kumallo", "Kaimai", "Kaitoa", Cargo Vessels, 94

United Glass Bottle Manufacturing Company Ltd., Electric Boost Melting System, 55

U.K. Atomic Energy Authority, Atomic Energy Exhibition for Australia, 513 ; British Non-Ferrous Metals Research Association, 638 ; Detection System, 55 ; Dounreay Atomic Energy Establishment, 747, 781, 784, 823 ; Engineering Problems in the Application of Nuclear Energy, 282, 320 ; Gas Sampling Manifold at Calder Hall, 219 ; Generation Costs of Nuclear Power, 937 ; Graphite Moderator, 143 ; Linear Induction Pumps for Liquid Metals, 752 ; Nuclear Power in 1956, 5 ; Operating Experience at Calder Hall, 241 ; Reactor Technology Training, 745 ; Scotland's First Nuclear Power Station, 216 ; Steam-Raising Towers, (Plate 3, 11.1.57) ; Helium Drier and Adsorber for "Dido" Research Reactor, 654 ; "Nero" Experimental Low-Energy Reactor, 499

United Kingdom National Commission for Unesco, Radio Isotopes in Scientific Research, 698

U.S. Army Corps of Engineers, Garrison Dam, 76 ; McNary Dam, 35 ; Progress of the Tennessee Valley Authority, 505

U.S. Atomic Energy Commission, American Research Reactor for Brazil, 507 ; Experimental Boiling Water Reactor at the Argonne National Laboratory, 623, 661, 699 ; Global Distribution of Radioactivity from Nuclear Detonations, 233 ; Heavy Water Separation Process, 503 ; Hydraulic Press for Shaping Radioactive Materials, 777 ; Penetration and Diffusion of Gamma-Rays, 193 ; Progress of the Tennessee Valley Authority, 465, 505, 546 ; Reactor Contract for Nuclear-Powered Merchant Ship, 891 ; Research Reactor for Japan, 75 ; Sodium Graphite Reactor Electric Power Plants, 424 ; Sodium Reactor Experiment Begins Operation, 967 ; Tenth Anniversary, 311

U.S. Bureau of Reclamation, American Water Power Schemes in 1956, 35 ; Drought in the Great Plains, 349 ; Palisades Dam, 35

U.S. National Committee on Radiation Protection, Global Distribution of Radioactivity from Nuclear Detonations, 233

U.S. Navy Bureau of Ships, Penetration and Diffusion of Gamma-Rays, 193

United States Steel Corporation, Austenitic Chromium-Manganese Steel Containing Nitrogen, 337 ; Tappan Zee Bridge, (Plate 15, 11.1.57)

United Steel Companies Ltd., Iron and Steel Works at Workington, 804 ; Production of Steel, (664) ; Walking Dragline, (Plate 9, 11.1.57)

University of Edinburgh, Post-Graduate School of Applied Dynamics, 957

Urquhart, D. J., National Lending Library for Science and Technology, 90

Urquhart, William, Magnetic Vee Block, (968)

V

Vauxhall Motors Ltd., High Output Diesel Engine, 265 ; Automobile Refinement, (352) ; Induction Hardening Attachment on an Automatic, 619

Verein Deutscher Eisenhuttenleute, "Stahl und Eisen", (78)

Verein Deutscher Maschinenbau-Anstalten, German Machinery Production, 464

Verein für Handwerkes-Ausstellungen und Messen e.V., German Handicrafts and Trade Fair, 735

Vereinigt Elektrizitatswerke Westfalen A.G., Gersteinwerk Power Station, (Plate 12, 4.1.57)

Vickers Ltd., "Super Tanker", (221) ; Engineering Education Developments, 498

Vickers, Sons and Maxim, Ship Model Experimental Tank, 145

Vickers-Armstrongs Ltd., H.M.S. "Excalibur" ; H.M.S. "Explorer", 29 ; Formation of a New Atomic Group, 49 ; Two-Cycle Engines ; Work on Hydrodynamics, 60 ; Aircraft Carrier "Hermes", 65 ; Destroyer "Aragua", 90 ; Double-Drum Winder, 140 ; Passenger Liner "Oriana", 145 ; Nuclear Machinery for Submarine, (390) ; H.M. Submarine "Explorer", 499

Vickers-Armstrongs (Aircraft) Ltd., "Supermarine" 544, (Plate 6, 4.1.57), 16 ; "Supermarine" N113 Day Fighter, 12; "V.1000", 53

Vickers-Armstrongs (Engineers) Ltd., H.M.S. "Salisbury", 29

Vickers-Armstrongs (Shipbuilders) Ltd., Oil Tanker "Spyros Niarchos", (Plate 10, 11.1.57); H.M.S. "Porpoise", 29

Vickers-Armstrongs (Supermarine) Ltd., Analogue Computers, 725

Vickers Nuclear Engineering Ltd., Nuclear Power Equipment, 5 ; Nuclear Machinery for Submarine, (390)

Vickery's Ltd., Cellulose Wadding Mill at Aylesford, 875

Victory Carriers Incorporated, 100,000-ton Tanker, 349

Villiers Engineering Company, Ltd., Direct Drive Engine, (97)

Vincent Engineering Company Ltd., Line Production of Die Castings, 453

Voith, J. M., G.m.b.H., Water Tractor for Belgian Congo, 273; Geesthacht Pumped Storage Scheme, 543

Volpich, H., Paddle Wheels, (428)
Vulcan Foundry Ltd., 1,500-h.p. Main Line Diesel-Electric Locomotive for Malayan Railway, 574 ; Main Line Diesel-Electric Locomotive for British Railways, 859 ; 1,000-h.p. Diesel-Electric Locomotives for British Railways, 913

W

W. and G. (Challow) Ltd., "Landrainer" Ditch Cleaning Machine, 763
Waddington, A., and Son, Ltd., Progress of the Metropolitan Water Board's New Works During 1956, 186
Wadley, T. L., Surveying Instrument for the Precise Measurement of Length, 538
Wakefield, L. P., Datum Selection in the Drawing-Office, 675
Walker, P. M., and Co. (Halifax) Ltd., Dounreay Atomic Energy Establishment, 747, 784, 823
Walkers (Century Oils) Ltd., Penetrating Oil, (839)
Wallace Productions Ltd., The Production of Steel, (664)
Wallsend Slipway and Engineering Co., Ltd., H.M.S. "Pellew", 29 ; Cruiser "Defence", 65, (196) ; Ore Carrier "Ruth Lake" ; Oil Tanker S.S. "Volvula", 94
Walter Kidde Nuclear Laboratories, Miniature Nuclear-Powered Battery, 966
Walterisation Company Ltd., Scale Removal Compound, (968)
Walters, W. Ivan, Obituary, (702)
Ward, T. W., Ltd., Dounreay Atomic Energy Establishment, 747, 784, 823
Wardell, K., European Congress on Ground Movements, 417
Warner and Swasey Company, Hydraulic Contour Tracing Attachment for Turret Lathes, 351
Watson, J. D. and D. M., Deephams Sewage Treatment Works at Edmonton, (Plate 1, 11.1.57) ; Derby Sewage Works Extensions Scheme, 44
Weatherill, F. E., Ltd., Mobile Loading Shovel, 915
Webb, Jarvis B., Spares Storage and Handling, 653
Weir, G. and J., Ltd., High Pressure Air Drying Equipment, 70
Weldall and Assembly Ltd., Repetitive Inflation of Tubeless Tyres, 539
Wellerman Brothers Ltd., Flat Slab Railway Overbridge, 915
Wenner-Gren British Columbia Development Company, Surveys for Engineering Development in British Columbia, (493)
Wentorf, Robert H., "Borazon" Synthetic Diamond-Like Material, 815
Werkspoor N.V., Radio Telescope at Dwingelo, 73 ; Holland America Liner "Statendam", 886
West Cheshire Water Board, Dee Scheme, 44
West Hartlepool Steam Navigation Company, Ltd., Welded Aluminium Deep Tank Hatch Cover, 379
Western Electric Company, Transatlantic Telephone Cable, 176 ; Magnetic Alloy of High Permeability and Low Hysteresis Loss, 427
Western Region of British Railways, Electrification of the Severn Tunnel Pumping Stations, 319 ; Heavy Express Locomotive Trials, 560, 594 ; Centenary of Crumlin Viaduct, 873 ; Cars by Rail, (930)
Westinghouse Brake and Signal Company, Ltd., Track Circuiting Equipment for British Main Line Electrification, 460
Westinghouse Electric Corporation, Eddystone Steam Power Station, 736 ; Testing Reactor, 1003
Westland Aircraft Ltd., "Westminster" Helicopter, 26; "Wessex" Turbine-Engined Helicopter ; "Whirlwind" Helicopters, 49, 923 ; "Widgeon" Helicopter, 923
Westminster Bank Ltd., Productivity, 150
West's Piling and Construction Company Ltd., Uses of the "Shell" Pile, (930)
Westwood, Joseph, and Co., Ltd., Wartime Excavating Machine, 396
Wharton Crane and Hoist Company Ltd., Dounreay Atomic Energy Establishment, 747, 784, 823
Wharton (Engineers) Ltd., Steel Conveyors, 227
Whatlings Ltd., Garry Dam, 46 ; Dounreay Atomic Energy Establishment, 747, 784, 823
Whetton, J. T., European Congress on Ground Movements, 417 ; General Survey of the Ground Movement Problem, 553, 562
Whitaker, Sir Arthur, Election of President, 161
White, J. Samuel, and Co., Ltd., H.M.S. "Dundas", 29 ; Lightship "Flame", 94
Whitelegg, R. H., Obituary, (468)
Whiteman, K. J., Hydraulic Lock at High Pressure, 554
Whitlock Brothers Ltd., Dragline Ditch Cleaning Machine, (Plate 8, 11.1.57) ; "Whitlock" Ditch Cleaning Machine, 763
Whitney, Charles S., Guide for Ultimate Strength Design of Reinforced Concrete, 110
Wickman Ltd., Steel-Cutting Carbide Tools, 109 ; Renewable Carbide Tip Tools, 458
Wiggins, D. L., Nothing Recedes Like Success, 81
Wild-Barfield Electric Furnaces Ltd., Induction Hardening Attachment on an Automatic, 619
Wilkes, A. H., and Co., Ltd., Combined Forge Furnace and Blowpipe Brazing Hearth, 107
Williams, B. R., Industry and Technical Progress, 819, 867
Williams Brothers Ltd., Trans-Iranian Pipeline, 513
Williams, Deacon's Bank Ltd., Productivity, 150
Williams, Frederic C., Award of the Benjamin Franklin Medal, 121
Williams, J. A. C., Work Sampling Techniques in Work Study, 245
Williams and James Ltd., High Pressure Air Drying Equipment, 70
Williamson, James, and Partners, Finlarig Power Station, 46
Williamson, John Thorburn, Diamond Mines, 373
Willment Brothers Ltd., Thrust-Boring Method of Culvert Construction, 881
Wilmot, P. D., Synthetic Fluids for Transformer Cooling, 410, 451
Wilson, A. G., Hydrokinetic Fluid Drives, 104
Wilson, G. A. M., Naval Nuclear Propulsion, 281
Wilson, G. R. S., British Railway Accidents in 1955 Report, 83
Wilson, P., Reversing Gear, 799
Wilton-Fijenoord N.V., Holland America Liner "Statendam", 886
Wimperis, H. E., A Victorian Apprenticeship, 134
Winand, M., Van de Graaff Accelerator for Liege University, 152
Woden Transformer Company, Ltd., Five-Ton Mains-Frequency Coreless Induction Furnace, 490
Wolf Electric Tools Ltd., Two-Speed Portable Electric Drill, 694
Wolff, R., Harvesting Machinery for Brown Sub-littoral Seaweeds, 400, 439
Wolverhampton Die Casting Company, Ltd., Line Production of Die Castings, 453
Wolverine Tube Division, Indirect-Fired Gas Turbines, 210
Woodfield Hoist and Associated Industries Ltd., Hose Handling Equipment, 379
Woods of Colchester Ltd., Fume Cupboard Fans, (276) ; Holland America Liner "Statendam", 886
Woollard, Lloyd, Training of Naval Architects, 280
Woolley, R.v.d.R., Large Telescopes, 828
Workington Hematite Iron Company Ltd., Iron and Steel Works at Workington, 804
Workington Iron and Steel Company, Iron and Steel Works at Workington, 804
World Power Conference, Eleventh Sectional Meeting, 386
Wrangham, C. E., Electrical and Allied Plant, 335
Wright, Gordon H., National Lending Library for Science and Technology, 174
Wright, P. J. F., Compression Testing Machines for Concrete, 639
Wyman-Gordon Company, Forging Press, (Plate 16, 11.1.57)

Y

Yarrow and Co., Ltd., H.M.S. "Keppel," 29 ; High Speed Steam Turbines, 49 ; H.M.C.S. "St. Laurent," 65 ; Tugs "Director" and "Dexterous," 486
Yorkshire Engineering Supplies Ltd., Wartime Excavating Machine, 396
Youngman, R. T., Incidence Indication for Aircraft, 457

Z

Zahnraderfabrik Renk Aktiengesellschaft, Hydrostatic Coupling, 812
Zeiss, Carl, Oberkochen, Angle Testing Instrument, 811
Zinn, W. H., Experimental Boiling Water Reactor at the Argonne National Laboratory, 623, 661, 699

SUBJECTS—CLASSIFIED

A

Abatement, Smoke, and Grit Arrester Equipment, Meldrum, Flood Page Ltd., 148
of Water Pollution, 622
Abrasion and Heat Resistant Protective Gloves, George Angus and Co., Ltd., (930)
Abrasive Cloth and Paper Plant, English Abrasives Corporation, (1004)
Absorptiometer, Spekker Photoelectric, Metallurgical Analysis by Means of, F. W. Hayward and A. A. R. Wood. (Review, 369)
Accelerator, 25,000MeV Particle, at Brookhaven National Laboratory, 507
5MeV Linear, for Industrial Radiography Mullard Ltd., 654
Van de Graaff, for Liege University, 152
Van de Graaff Particle, 58
Accidents, Industrial, 916
in 1955, British Railways, 83
Road, Research on Injuries, 43
Accuracy, Dynamics and Design of Cams, H. A. Rothbart, (Review, 215)
Act, Clean Air, 1956, 89
Factories, Inside the Fence, 832
Restrictive Trade Practices, 1956, 32
Adsorber and Drier, Helium, for "Dido" Research Reactor, British Oxygen Engineering Ltd., 654
Advanced Aeronautical Education, (428); Conference, 488; H. A. Mettam, (Letter, 608)
Advances in Aircraft Bonding, Aero Research Ltd.
Advisory Service, Manufacturers', 111
Aerial Photographic Negatives, Electronic Printer, Cintel-Television Ltd., 914
Aerodynes, Unusual, 846

AERONAUTICS

Advanced Aeronautical Education, (428); Conference, 488; H. A. Mettam, (Letter, 608)
Advances in Aircraft Bonding, Aero Research Ltd., 564
Aeronautics in 1956, 16, 53
at Imperial College, 838
Air Cargo Liner, Sir W. G. Armstrong Whitworth Aircraft Ltd., 228
Deterrent, (Leading Article, 668)
Speed Record, C. H. Chichester Smith, (Letter, 174)
Travel, Film, (702)
Aircraft Development and Research, Elliott Brothers (London) Ltd., 161
Hydraulics, H. G. Conway, (Review, 871)
Turbines, "Britannia", 593
Airfield Power Unit, Petbow Ltd., (276)
All-weather Fighter, P.1B, English Electric Co., Ltd., 618
Aluminium Rivets for Aircraft, (B.S.I., 649)
Australian Aeronautical Research, 880
Automatic Position Plotting, Standard Telephones and Cables Ltd., 344
Bell X-2 Supersonic Aircraft, (Plate 16, 4.1.57)
Boeing 707 Airliner, 53
Breguet 765 "Deux Ponts" Transporter Aircraft, 884
Bristol "Britannia" 300 Series, (Plate 6, 4.1.57)
"Britannia" Airliner First Fight, (78)
"Olympus" 6 Engine, Test, (236)
"Olympus" B.0L.6 Bomber, (930)
"Orion" Turbo-prop, (Plate 5, 4.1.57)
Cambered Supersonic Wings, (664)
Chance Vought "Crusader" Swept Wing Supersonic Aircraft, 16
Convair B-58 "Hustler", Supersonic Aircraft, (Plate 16, 4.1.57)
"F.102A" Delta Aircraft, 16
"Conway" Engine, Rolls-Royce Ltd., (1004)
Defensive Missiles, De Haviland Propellers Ltd., 694
De Havilland "Sea Vixen" Naval Interceptor, (508)
De-Icing Methods, Fokker Aircraft, (156)
Economics of Speed, Lord Douglas of Kirtleside, 291
Emergency Energy Sources, Hymatic Engineering Co., Ltd., 807
English Electric "P1", (Plate 6, 4.1.57); 16
Fairey "Delta 2", R. L. Lickley and L. P. Twiss, 297
"Gannet" Anti-submarine Aircraft, 49
Fighter Policy, (Leading Article, 279)
Fire Resistant Cables for Aircraft, W. T. Henleys Telegraph Works Co., Ltd., 407
Flow Direction Measurements in Supersonic Wind Tunnels, (Report, 19)
"Flying Atar" C-400 P-2 Vertical Take-off Aircraft, 922
Fouga Jet Trainer, 884
Future of the Aircraft Industry, 821
"Gerfaut" Delta Aircraft, 884
Glass Fibre Aircraft Seat, Microcell Ltd., (719)
"Griffon 02", First Flight on Ram Jet, SNCAN, 999
Ground Radar Calibration, (797)
Grumman "Tiger" Carrier-borne Fighter, 16
Helicopter Engine Testing, Alvis Ltd., 264
High-Speed Flight, E. Ower and J. Nayler, (Review, 101)
Hurel-Dubois Military Transport Aircraft, 885
"Hydrospin" Machine for Forming Jet Engine Parts, Solar Aircraft Co., 275
Incidence Indication for Aircraft, 457
Interavia ABC Directory of World Aviation, (Review, 799)
Jet Airliner Variant, De Havilland "Comet", (816)
Propulsion, De Havilland, (390)
Transport Aircraft, "SE210" Caravelle, 922
"Jindivik" Target Aircraft, Fairey Aviation Co., Ltd., 922
Kinetic Heating in Aircraft and Guided Missile Structures, Metropolitan-Vickers Electrical Co., Ltd., 957
Laboratory for Flight Physiology, 812
Lanchester Memorial Lecture, Theodore von Karman, 745
Lightweight Fighter Engine, Bristol "Orpheus B Or 3", (854)
Lockheed C-130 "Hercules" Medium Transport Aircraft, 922
"Starfighter" Aircraft, 16
YF-104 Supersonic Aircraft, (Plate 16, 4.1.57)
McDonnell "Voodoo" Single Seater Fighter, 16
Miles M.100 "Student" First Flight, 809
Military Aircraft Developments, Fairey "Gannet"; Bristol 192 Helicopter, 847
Missile Construction, Bulletin No. 173, (901)
"Mystere" Jet Fighter, 884
"Noratlas" 2502 Aircraft, 884
Nord "Griffon" Delta Aircraft, 16
Northrop SM-62 "Snark" Offensive Pilotless Weapon, 922
"Nothing Recedes Like Success", (Leading Article, 81)
Overseas Trade by Air, 916
Patent, 817
Planning Hong Kong Airport, 357
Press for Aircraft Components, 15,000-ton, G. Siempelkamp and Co., Maschinenfabrik, 545
Prestressed Concrete Runways, 319
Principles of Guided Missile Design, E. A. Bonney, M. J. Zucrow and C. W. Besserer, (Review, 368)
Problems of Aircraft Production, R. Maudling, 71
Recent First Flights, Saunders-Roe S.R.53; Miles M.100 "Student", 809
Recoverable Test Vehicle, Bristol "Bobbin", 497
Reflective Signs, (314)
Remote Controlled Target Plane, "CT-20", 922
Rocket Symposium, 945
Rotor Tip Pressure Jets, Fairey Aviation Co., Ltd., 686
Salon Internationale de l'Aeronautique, 884, 923
Saunders-Roe "Princess" Flying Boat G-ALUN Air and Water Performance Tests, (Report, 894); S.R.53 First Flight, 809
Scientific Investigation of the Upper Atmosphere, 342
Sensitive Altimeters for Aircraft, (B.S.I., 444)
Short S.C.1 Research Aircraft, (588)
Soil Stabilisation at Southend Airport, 631
Subsonic Flow Past Swept Wings, (Report, 19)
Sud Aviation S.E.3130 "Alouette 11" Helicopter; SO. 1221 "Djinn" Helicopter, 923
Sud-Est "Durandal" Target Defence Interceptor Aircraft, 16
Supermarine N.113, Fleet Fighter, (156)
Supersonic Airliner Projected, 189
Jet Fighters, SAAB-35, (Plate 13, 4.1.57)
Tactical Transport Aircraft, De Havilland Aircraft of Canada Ltd., 461
Titanium in the Aircraft Industry, Imperial Chemical Industries Ltd., 295
Transonic Tunnel Testing Technique, 69
"Trident 11" Aircraft, 16
Turbo-jet Engine "Atar 9", S.N.E.C.M.A., 923
Unconventional Aircraft, (78)
Unusual Aerodynes, 846
"Vantour" All-Weather Fighter, 884
Vickers "Supermarine" 544 Fighter, (Plate 6, 4.1.57); 16
Westland Whirlwind" Helicopter; "Widgeon" Helicopter, 923
Wind Tunnel, Aircraft Research Association, (Plate 6, 11.1.57); 55
Tunnels, Royal Aircraft Establishment, Bedford, 986

AFRICAN ENGINEERING NEWS

Aluminium Grandstand Roof, Johannesburg, 579
Beyer-Garratt Locomotives for Rhodesia Railways, Beyer Peacock and Co., Ltd., 669
Engineering Research Progress in the Union, 383
Experiments to Reduce Evaporation Loss from Reservoirs, (468)
Kariba and Zambesi, 383
Open Pit Working Contracts for Nchanga, 383
Power Station at Williamson Diamond Mines, 373
Precooling Store for Table Bay, 921
Projected Water Development in the Union, 383
Railway Works in South Africa, 919
Slag and Masonry Cement, 383
Spacing of Railway Sleepers on South African Railways, 227
Storms River Bridge, South Africa, 583
Trade with South Africa, 500
Uganda Electricity Board Programme, (588)
Union Railway and Harbour Developments, 271
Volta Bridge, 185
River Project, 20

Aggregates, Concrete, from Fly Ash, 707
Agreement, Commercial, for Pressurised-Water Power Plants, 161
Trade, Anglo-Polish, 32
Agricultural Engineers' Association, Agricultural Machinery Industry's Prospects, 150

AGRICULTURAL MACHINERY

Agricultural Engineering Scholarships, (314)
Machinery Exports, 620
Machinery Industry's Prospects, 150
Combine Harvester Mounted on Ferguson Tractor, Massey-Harris-Ferguson Ltd., (Plate 8, 11.1.57)
Harvester, Self-Propelled, Ransomes, Sims and Jefferies Ltd., (Plate 8, 11.1.57)
Ditch Cleaning Machines, 763
Dragline Ditch Cleaning Machine, Whitlock Bros., Ltd., (Plate 8, 11.1.57)
Electricity in Agriculture, Film, (196)
Farming Machinery a Century Ago, G. E. Fussell, 981
Hay and Straw Baler, International Harvester Company of Great Britain Ltd., (Plate 8, 11.1.57)
Patent, 855
Safety Devices for Agricultural Machinery, F. Lee, 405
Sugar Beet Harvester, John Salmon Engineering Co., Ltd., (Plate 8, 11.1.57)
Tractor Testing Techniques, T. C. D. Manby, 593

Aid, Engine Starting, Power Frequency Heating Ltd., 847
Air Act, 1956, Clean, 89
Cargo Liner, Sir W. G. Armstrong Whitworth Aircraft Ltd., 228
Clean, and Mechanical Engineers, 328
Cleaner, Investigation of a Vortex, T. C. Daniels, 358
Coming Conference on Clean, (Leading Article, 200)
Compressor, Mobile, Hymatic Engineering Co., Ltd., 71
Compressor, Tractor Mounted, B.E.N. Patents Ltd., (38)
Deterrent, (Leading Article, 668)
Driers, Lightfoot Refrigeration Co., Ltd., (664)
Drying Equipment, High Pressure, Birlec Ltd., 70
Filter, Automatic, A. B. Svenska Flakfabriken, 386
Flow for Compressors and Exhausters, Measurement, (B.S.I., 955)
Overseas Trade by, 916
Speed Record, C. H. Chichester Smith, (Letter, 174)
Travel, Film, (702)
Turbine, Closed Cycle, for Naval Use, W. Spillman, 995
Vortex Classifier for Dry Powders, Sharples Centrifuges Ltd., 378
Air-Blast Circuit Breaker for 132kV, Ferguson Pailan Ltd., 533
Transformer Cooler, Forced-Oil, British Thomson-Houston Co., Ltd., 847
Air-Break Switchgear, 11kV, A. Reyrolle and Co., Ltd., 536
Air-Conditioned Pressurised Assembly Cabinets, British Manufactured Bearings Co., Ltd., 380
Air-Cooled Oil Engine, Ruston and Hornsby Ltd., 499
Induction Regulator, Laurence, Scott and Electromotors Ltd., 572
"PD4M" Diesel Engine, Petters Ltd., 102
Aircraft, (Patent, 817)
Aluminium Rivets, (B.S.I., 649)
Bonding, Advances, Aero Research Ltd., 564
Breguet 765 "Deux Ponts" Transporter, 884
Carrier, Attack, U.S.S. "Saratoga", 65
Chance Vought "Crusader" Swept Wing Supersonic, 16
Components, Press for, 15,000-ton, G. Siempelkamp and Co., 545
Convair Delta "F.102A", 16
Development and Research, Elliott Brothers (London) Ltd., 161
Developments, Military, 847
Direction Frigate H.M.S. "Salisbury", 29
Fairey "Gannet" Anti-submarine, 49
Fire Resistant Cables for, W. T. Henleys Telegraph Works Co., Ltd., 407
"Gerfaut" Delta, 884
"Flying Atar" C-400 P-2 Vertical Take-off, 922
and Guided Missile Structures, Kinetic Heating, Metropolitan-Vickers Electrical Co., Ltd., 957
Hurel-Dubois Military Transport, 885
Hydraulics, H. G. Conway, (Review, 871)
Incidence Indication, 457
Industry, Future of, 821
Industry, Titanium, Imperial Chemical Industries Ltd., 295
"Jindivik" Target, Fairey Aviation Co., Ltd., 922
Lockheed C-130 "Hercules" Medium Transport, 922
Lockheed "Starfighter", 16
"Noratlas" 2502, 884
Nord "Griffon" Delta, 16
Production, Problems, R. Maudling, 71
Research Association, Wind Tunnel, (Plate 6, 11.1.57); 55
"SE210 Caravelle" Jet Transport, 922
Seat, Glass Fibre, Microcell Ltd., (719)
Sensitive Altimeters for, (B.S.I., 444)
Short S.C.1 Research, (588)
Sud-Est "Durandal" Target Defence Interceptor, 16
Supersonic, Bell X-2, (Plate 16, 4.1.57)
Supersonic, Convair B-58 "Hustler", (Plate 16, 4.1.57)
Supersonic Lockheed YF-104, (Plate 16, 4.1.57)
Tactical Transport, De Havilland Aircraft of Canada Ltd., 461
Turbines, "Britannia", 593
Unconventional, (78)
Airfield Power Unit, Petbow Ltd., (276)
Airliner, Boeing 707, 53
Bristol "Britannia" First Flight, (78)
Projected, Supersonic, 189
Variant, Jet, De Havilland "Comet", (816)
Airport, Planning Hong Kong, 357
Soil Stabilisation at Southend, 631
Alarm Unit and Smoke Indicator, Lancashire Dynamo Electronic Products Ltd., 726
Alloy Containers for Goods Transport, Light, Tracons Ltd., (437)
Extrusions, Stepped Aluminium, Production in the United States, 114
Fishing Boat, Aluminium, Brooke Marine Ltd., 345
Magnetic, of High Permeability and Low Hysteresis Loss, 427
Series in Physical Metallurgy, and Principles of Physical Metallurgy, Morton C. Smith, (Review, 409)
Tubing, Heraeus Hanau, 811
Unpainted Aluminium, Ship Superstructure, Davie Shipbuilding Ltd., 307
Alloys, Damping Characteristics and Elastic Modulus of Iron-Chromium, 136
High-Conductivity Copper, (Report, 447)
High-Temperature Oxidation of Carbide, 646
at High Temperatures, Tensile Properties of Copper-Nickel, 988
Magnesium-Lithium, 989
Oxygen Cutting Titanium and Titanium, G. Coates, 132
All-weather Fighter, P.1B, English Electric Co., Ltd., 618
Alternator Set, "No-Break", for Standby Power Supply, Lister-Blackstone, 912
Sets, Diesel, Metropolitan Water Board, (Plate 5, 4.1.57)
with Voltage Regulator Control System, Arthur Lyon and Co. (Engineers) Ltd., 533
Alternators, Direct-Water-Cooled Stator Windings, General Electric Co., Ltd., 878
Altimeters for Aircraft, Sensitive, (B.S.I., 444)
Aluminium Alloy Extrusions, Stepped, Production in the United States, 114
Alloy Fishing Boat, Brooke Marine Ltd., 345
Alloy Ship Superstructure, Unpainted, Davie Shipbuilding Ltd., 307
Chromium Steels, 835
Conductors in Insulated Cables, (B.S.I., 67)
Conductors for Overhead Power Transmission, (B.S.I., 269)
Deep Tank Hatch Cover, Welded, Head Wrightson Aluminium Ltd., 379
Development Association, Electrical Engineering and Aluminium, (303)
and Electrical Engineering, (303)
Gas Welding of Wrought, (B.S.I., 876)
Grandstand Roof, Johannesburg, 579
Production in the Ohio River Valley, 427
Research Scholarship, Structural, (196)
Rivets for Aircraft, (B.S.I., 649)
in Shipbuilding, Use and Welding, (Review, 485)
Steels, Nitrides in, 136
Tin Bearings, (402)
Tubing, Seam-Welded, T.I. Aluminium Ltd., 268
Welded Tubing, T.I. Aluminium Ltd.; (Plate 4, 4.1.56)

AMERICAN ENGINEERING NEWS

Aluminium Production in the Ohio River Valley, 427
American Concrete Institute, Ultimate Strength Design in Reinforced Concrete, 110
4-4-0 Locomotives, 366
Institute of Electrical Engineers, Symposium, Transatlantic Telephone Cable, 135, 176
Apparatus for Wavelength Determination, Baird Associates, 115
Atomic Energy Commission, U.S., Tenth Anniversary, 311
Energy Developments, (Plate 15, 4.1.57)
Automatic Loading Device for Centre Lathe, Monarch Machine Tool, Co., 275
Automation in 1957, 585
"Borazon" Synthetic Diamond-Like Material, 815
"Canberra", Heavy Cruiser, 30
Civil Engineering Practice, American, (Review, 409)
Construction of 100,000-ton Tanker, 349
Continuous Casting Machine for Non-Ferrous Metals, Lobeck Casting Processes Inc., 350
Dedication of Historic Steam Turbo-Generator, 349
Discovery of New Nuclear Reaction at Berkeley, 274
Drought in the Great Plains, 349
Eddystone Steam Power Station, 736, 774

Electrodynamic Calibration of Vibration Pick-ups, 586
Electronic Calibration Centre at the National Bureau of Standards, 852
Enrico Fermi Professorship at the University of Chicago, 815
Experimental Boiling Water Reactor at the Argonne National Laboratory, 623, 661, 699
Export of Research Reactor to Japan, 75
Garrison Dam and Reservoir, 76
Global Distribution of Radioactivity from Nuclear Detonations, 233
Gold-Coated Molybdenum for Turbine Blades, (587)
High-Head Turbine Test Stand, 153
High-Precision Interferometer for Gauge Block Comparison, 814
Hiwassee Dam, Tennessee Valley Authority, 76
Hydraulic Contour Tracing Attachment for Turret Lathes, Warner and Swasey Co., 351
Press for Shaping Radioactive Materials, Loewy-Hydropress Division, 777
"Hydrospin" Machine for Forming Jet Engine Parts Cincinnati Milling Machine Co., 275
International Atomic Exposition at Philadelphia, 889, 927, 965, 1000
Magnetic Alloy of High Permeability and Low Hysteresis Loss, 427
Mellon Institute Expansion, 77
Missile Development Programme, 813
National Automobile Show, 193
Particle Accelerator, 25,000MeV, at Brookhaven National Laboratory, 507
Penetration and Diffusion of Gamma-Rays, 193
Production of Stepped Aluminium Alloy Extrusions, 114
Reactor Contract for Nuclear-Powered Merchant Ship, 891
Research Reactor for Brazil, 507
Reactor for Venezuela, 75
Richmond-San Rafael Bridge, California, (Plate 15, 11.1.57)
Road Tunnel Under Lower Fraser River, Vancouver, 48
Rockslide at Schoellkopf Power Station, 77
Rolling Mill and Heavy Press Installations, (Plate 16, 11.1.57)
Shortage of Engineers, 75
Sodium Graphite Reactor Electric Power Plants, 424
Reactor Experiment Begins Operation, 967
Soil Engineering in Frost Areas, (701)
Solid State Oscillator for Microwave Frequencies, Bell Telephone Laboratories, 389
Stud Welding Fasteners for Curtain Walls, 274
Surface Leakage Problems on High-Voltage Insulators, 387
Talking the American Way, (Leading Article, 934)
Tennessee Valley Authority, Progress, 465, 505, 546
"Thruway" or Tappan Zee Bridge Crossing the Hudson River, New York, (Plate 15, 11.1.57)
Toll Roads in the U.S.A., H. J. H. Starks, 288, 323
TVA Costs and Prices, George L. Schlaepfer, (Letter, 722)
Twenty-High Cluster Mill for Rolling Ultra-Thin Strip, Loma Machine Manufacturing Co., 351
U.S.S. Atomic Powered Submarine "Sea Wolf", 65
Destroyer "John Paul Jones", 65
"Saratoga" Attack Aircraft Carrier, 65
Vacuum Impregnator for the Pakistan Railways, Large, 701
Washington University Research Computer Laboratory, (351)
Water Power Schemes in 1956, 35, 76
X-Ray Studies of Stresses in Metals, 154

Amplifiers, Travelling-Wave Tubes as U.H.F., English Electric Co., Ltd., 267
Analog Computer Techniques, Clarence L. Johnson, (Review, 256)
Computers, Electronic, G. A. and T. M. Korn, (Review, 256)
Analogue Computer, Elliott Brothers (London) Ltd., (Plate 7, 11.1.57)
Computer, Short Brothers and Harland Ltd., (Plate 7, 11.1.57)
Computers, Short Brothers and Harland Ltd., 725
Computer at Imperial College, Sunvic Controls Ltd., 376
Instrument, Laurence Scott and Electromotors Ltd., 766
Analogy Calculator, Electric, Gaz de France, 925
Analyser, Fluid Network, Nash and Thompson Ltd., 765
Analysing and Testing Coal and Coke, (B.S.I., 955)
Analysis as Applied to Sewage and Sewage Effluents Methods of Chemical, (Review, 255)
Engineering, Stephen H. Crandall, (Review, 338)
of Engineering Structures, A. J. S. Pippard and J. F. Baker, (Review, 682)
of Frames, Nomograms for, J. Rygol, (Review, 987)
Gas Engine, Edward A. Bruges, 790
Improved Methods of Particle Size, T. H. Hughes, 860
Metallurgical, by means of the Spekker Photoelectric Absorptiometer, F. W. Hayward and A. A. R. Wood, (Review, 369)
Tables, Vibration, (Report, 302)
Angle Testing Instrument, Carl Zeiss, 811
Anglo-German Trade, 420
Anglo-Polish Trade Agreement, 32
Anglo-Soviet Trade, 620, 996
Anniversary, "Stahl und Eisen", (78)

ANNUAL ARTICLES

Aeronautics in 1956, 16, 53
British Railways in 1956, 28
Civil Engineering in 1956, 20, 44
Coal, Iron and Steel in 1956, 62
Electrical Engineering in 1956, 9, 55
Gas Turbines in 1956, 26
Naval Construction in 1956, 29, 65, 92, (196)
Nuclear Power in 1956, 5
Progress of the Metropolitan Water Board's New Works during 1956, 186
Royal Navy in 1956, 12, 49
Shipbuilding and Marine Engineering in 1956, 23, 60, 94
Annual Review, Ship and Boat Builder, 1957, (Review, 683)
Annular Coolant Passage, Radial Temperature Distribution, Henry Barrow, 713
Anti-aircraft Frigate "Lynx", 29
Frigate "Puma", 29
Anti-Bridging Device for Storage Hoppers, Paterson Hughes Engineering Co., Ltd., 985
Anti-Corrosion Coating, Jenolite Ltd., (59)
Anti-submarine Aircraft, Fairey "Gannet", 49
Frigate "Dundas", 29
Frigate "Torquay, 29
Frigate "Whitby", 29
Position To-day, (Leading Article, 706)
Anti-Vibration Mounting, 494
Antioxidant Plant, Imperial Chemical Industries, Ltd., (236)
Apapa Wharf, Lagos, (664)
Appliances and Workshop Tools, (Patents, 509, 665, 1005)
Application of Computers, An Industrial, G. H. Room, (Letter, 368)
of Computers, Industrial, C. M. Berners-Lee, (Letter, 446)
and Design, Bearing, D. F. Wilcock and E. R. Booser, (Review, 836)
of Glass-Reinforced Plastic, Structural, Mendip (Chemical Engineering) Ltd., 380
of Machinery in the War Department, 1857, 161
of Nuclear Energy, Engineering Problems, Sir Claude D. Gibb, 282, 320
Applications of Electrodeposits, 835
of Oil Engines, Rolls-Royce Ltd., 769
Applied Dynamics, Post-Graduate School, 957
Apprentice Training Scheme, F. Perkins Ltd., (148)
Training School, Railway, London Midland Region, (559)
Apprenticeship, Automobile, Ford Motor Co., Ltd., 262
in the Plastics Industry, 553
Victorian, H. E. Wimperis, 134
Arc Welding, High-Frequency Injector, Metropolitan-Vickers Electrical Co., Ltd., 146
Arch, Steel, Across Volta River, (Plate 2, 4.1.57)
Architects', Engineers' and Surveyors' Boxwood Scales, (B.S.I., 369)
Naval, and Marine Engineers, Education and Training, 253
Training of Naval, (Leading Article, 280)
Architectural History, Railway Station, Carroll L. V. Meeks, (Review, 987)
Arcs, Oscillographic Observation of Short Duration, (Report, 1006)
Arc-Welding Costs, (Report, 970)
Area, European Free Trade, (Leading Article, 239)
Argonne National Laboratory, Experimental Boiling Water Reactor, 623, 661, 699
Armour Research Foundation, European Office, 272
Arrester, Grit, and Smoke Abatement Equipment, Meldrum, Flood Page Ltd., 148
Lightning, Asea Electric Ltd., 534
380kV Surge, Siemens-Schuckertwerke, 232
Art and Science of Protective Relaying, C. Russell Mason, (Review, 569)
Arthur Woolf—Master Mechanic, T. R. Harris, 600
Articles, Premiums for Technical, (681)
Articulated-Steel-Plate Conveyor, Richard Sutcliffe Ltd., 345
Arts and Science Course, Cambridge, (Leading Article, 972)
Asbestos Cement Pressure Pipes, (B.S.I., 149)
Fibre Jointing, Compressed, (B.S.I., 334)
Ash, Fly, Concrete Aggregates from, 707
Aspects of Sound, Technical, E. G. Richardson, (Review, 683)
Assay Furnace, Royce Electric Furnaces Ltd., (664)
Assembly Cabinets, Air-Conditioned Pressurised, British Manufactured Bearings Co., Ltd., 380
Asservissements, Theorie et Technique des, J. C. Gille, M. Pelegrin and P. Decaulne, (Review, 368)
Association of British Chambers of Commerce, Budget Recommendations, 72
of Consulting Engineers, Annual Dinner, 281; Annual Report, 897; Consulting Engineers in Industry, (38)
of Foremen Engineers, 1857, 394
of Mining Electrical and Mechanical Engineers, Impact of Nuclear Energy on the Twentieth Century, T. A. Allibone, 984
of Supervisory Staffs, Executives and Technicians, Automation, 381
Technique Maritime et Aeronautique, Annual Meeting, (854)
Atmosphere, Discharge from an Engine Cylinder to, R. S. Benson, 946, 976
Upper, Scientific Investigation of, 342
Atmospheric Gas Engine, Centenary of the Free-Piston, 901
Atomic Community, European, 659
Energy Developments in the United States, (Plate 15, 4.1.57)
Energy Establishment, Dounreay, 747, 784, 823; (Leading Article, 781)
Energy Exhibition for Australia, 513
Exposition at Philadelphia, International, 889, 927, 965, 1000
Factory at Marcoule, French, (Plate 14, 4.1.57)
Powered Submarine, U.S.S. "Sea Wolf", 65
Powered Tankers, (Leading Article, 432)
Atomisation of Water by Spinning Discs, J. R. Pattison and J. D. Aldridge, 514
Attack Aircraft Carrier, U.S.S. "Saratoga", 65
Austenitic Chromium-Manganese Steel Containing Nitrogen, 337

AUSTRALIAN ENGINEERING NEWS

Aeronautical Research, 880
Atomic Energy Exhibition for Australia, 513
Copper Industry, 658
Development and Growth of the Australian Steel Industry, 500
Major Development Works in Australia, (156)
P. and O. Liner for Australian Service, 45,000-ton, Harland and Wolff Ltd., 185
Passenger Train Service, Melbourne-Sydney, 250
Salt Production at Whyalla, 382
Skelp Mill at Newcastle, N.S.W., 537
Wire Weaving Industry, 382

Austria, Liquid Petroleum Gas Plant, BP Benzin und Petroleum A.G., 544
Authorship, Technical, (892)
Automatic Air Filter, A. B. Svenska Flakfabriken, 396
Billet Shear, Lamberton and Co., Ltd., 259
Control Device for Press Operation, Press Guards Ltd., 188
Control for Oil-Fired Boilers, James Gordon and Co., Ltd., 655
Control for 1,200-h.p. Sinking Winders at Lea Hall Colliery, 55
Crane and Crane Rail Lubrication, Centralube Ltd., (809)
Feeding Equipment for Nut Welding Machine, Rhoden Partners Ltd., 767
Five-Station Welding Plant, Briggs Motor Bodies, (Plate 4, 4.1.57)
Flash Welder, Asea Electric Ltd., 534
Gear Changing on Diesel Railcars, Self-Changing Gears Ltd., (980)
Induction Hardening Attachment on an, B.S.A. Tools Ltd., 619
Internal Grinding Machine, Keighley Grinders, (M.T.) Ltd., 459
Loading Device for Centre Lathe, Monarch Machine Tool Co., 275
Loading Device for Gear Hobbing Machines, Churchill Gear Machines Ltd., 220
Pilot, Decca Navigator Company, Ltd., 378
Position Plotting, Standard Telephones and Cables Ltd., 344
Train Control, (930)
Triple-draw High-speed Drawbench, Head Wrightson Machine Co., Ltd., (Plate 4, 4.1.57)
Ultrasonic Inspection, Kelvin and Hughes Ltd., 455
Automation, Association of Supervisory Staffs, Executives and Technicians, 381
and Computation, British Conference, 631
Electronic Reading, Solartron Electronic Business Machines Ltd., 414
and Instruments Congress, 773
Instruments and Electronics, 724, 765
Machine Tool, Centre des Recherches Scientifiques Industrialles et Maritimes de Marseille, 924
in 1957 in America, 585
and Social Progress, S. Lilley, (Review, 759)
in Theory and Practice, E. M. Hugh-Jones, (Review, 174)

AUTOMOBILES

All-Wheel-Drive Diesel Truck, Ford Motor Company, 385
American National Automobile Show, 193
Apprenticeship, Automobile, Ford Motor Co., Ltd., 262
Automobile Refinement, Vauxhall Motors Ltd., (352)
Berkeley Car, (Plate 3, 4.1.57)
Cab-over-engine Vehicles, Ford Motor Co., Ltd., 802
Cars by Rail, (930)
Coach Transmissions, Leyland "Tiger Cub", (276)
Electric Gear Selection, 106
E.R.A. Suspension Test Vehicle, (Plate 6, 11.1.57)
Exports of the Motor Industry, 695
Fire-Fighting Tenders, Two, Merryweather and Sons, Ltd., 498
High M.E.P.—Low Revs, (Leading Article, 512)
Hydrokinetic Fluid Drives, J. G. Giles, 104
Hydrostatic Gearbox, S.p.A. Cambi Idraulici Badalini, 113
Integral Construction for Road Vehicles, (Plate 3, 4.1.57)
Leyland "Atlantean" Bus, (Plate 3, 4.1.57)
Miniature Motor Car, Henry Meadows Ltd., 419
Motor Vehicle Manufacture, (508)
Vehicle Mechanic's Text Book, F. K. Sully, (Review, 528)
Vehicle Regulations, (968)
Motorised Pedal Cycles, 848
New Roads and Vehicle Taxation, 438
Positive Axle Lubrication, Leyland, (732)
Problems of the Small Utility Car, D. Giacosa, 616
Producer Gas Plant for Cars and Tractors, Aktiebolaget Volvo, 386
Prospects of the Motor Cycle, 497
Renault "Etoile Filante", (Plate 12, 11.1.57)
Repetitive Inflation of Tubeless Tyres, Weldall and Assembly Ltd., 539
Road Transport, (Patents, 429, 469, 969, 1005)
"Routemaster" Bus, (428)
Supercharged N.S.U. Motor-cycle, (Plate 12, 11.1.57)
Synchromesh Transmission, David Brown Automobile Division, (15)
Tractor and Trailer Vehicles for Opencast Coal Hauling, Costain Mining Ltd., (Plate 9, 11.1.57)
Transmission Gear Heat-Treatment Installation, David Brown Industries Ltd., 652
Truck of Integral Construction, Mann Egerton and Co., Ltd., (Plate 3, 4.1.57)
Wear and Tear, James Johnson, 605

Autorail Express Trains Between Paris and Zurich, 869
Auxiliaries for Operation of Fluorescent Lamps, (B.S.I., 334)
Average Earnings, 542
Aviation, Interavia ABC Directory of World (Review, 799)
Awards, Institution of Mechanical Engineers, 121
Axiale Schaufelgitter, Untersuchungen uber die Driedimensionale Potentialstromung durche, (Report, 970)
Axial-flow High-pressure Fan, A. B. Svenska Flaktfabriken, 230
Axle Lubrication, Positive, Leyland, (732)
Aylesford, Cellulose Wadding Mill, Kimberley-Clark Corporation, 875

B

Backlash Between Gear Teeth, Permissible, W. A. Tuplin, 951
Baking Impregnating Varnishes, Organic, For Electrical Purposes, (B.S.I., 369)
Baler, Hay and Straw, International Harvester Company of Great Britain Ltd., (Plate 8, 11.1.57)
Ball, Tube and Rod Mills, Gear Failures, H. E. Rose, 522
Ballistic Rocket Era and the Navy, (Leading Article, 42)
Band Saw Butt Welder, Elektro-Apparate-Bau G.m.b.H., 851
Barbados, Deep-Water Harbour at Bridgetown, 821
Barking Area, Goods Depot, (588)
Barrage, Construction of Chainat, in Thailand, 448
Barrow and Immingham Docks, Improvements, (664)
Bars and Tubes, Steel, Talbot Steel Tube Co., Ltd., (993)
Base, Changes in a 50m Mural Tape Standardising, L. O. C. Johnson, 632
Basic Materials Prices, 111
Basis of British Nuclear Energy Conference, Broadened, 83
Batch Counting and Mixing Equipment, Sines Engineering Co., Ltd., (854)
B.B.C. Handbook, 1957, (Review, 215)
Beacon, Microwave Course, 378
Beams, Ship's Deck, Oxygen-Cutting Equidment, British Oxygen Gases Ltd., 253
Bearing Design and Application, D. F. Wilcock and E. R. Booser, (Review, 836)
Failures, Plain, P. P. Lover, (694)
Bearings, Aluminium-Tin, (402)
Lubrication, F. T. Barwell, (Review, 338)
and Supports, (Patent, 817)
Thin-Walled, for Heavy Engineering Applications, Glacier Metal Co., Ltd., (468)
Bed Technique, Fluid, for the Textile Industry, 651
Bedford, Royal Aircraft Establishment, Wind Tunnels, 986
Beds, Diesel Engine Test, C.A.V. Ltd., (Plate 6, 11.1.57)
Bee-Hive, The Great, 1857, 668
Beet Harvester, Sugar, John Salmon Engineering Co., Ltd., (Plate 8, 11.1.57)
Belgian Congo, Water Tractor, 273
Belt Conveyors, Design, (Review, 215)
Belting, Vegetable-Tanned Leather, (B.S.I., 876)
Belts, Vee, British Tyre and Rubber Co., Ltd., (930)
Bending and Folding Machine, Scottish Machine Tool Corporation Ltd., 684
Machine, Heavy-Duty Three-Roll Plate, Bronx Engineering Co., Ltd., 619
Benjamin Franklin Medal, Royal Society of Arts, 121
Berkeley Nuclear Power Station, 143, 650; Progress, 991
Berlin, International Building Exhibition, 1957, 310
Berth at Tilbury Docks, 973
Bevel Gears, Hobbing Machine for Small Cyclo-Palloid, W. Ferd. Klingelnberg Sohne, 545
Protractor, Vernier Bevel, MZB Messzeug G.m.b.H., 273
Billet Shear, Automatic, Lamberton and Co., Ltd., 259
Birmingham Factory Extension, Phosphor Bronze Co., Ltd., 859
Inner Ring Road, 395
to Preston Motorway, Route, 593
Birthday Honours, 953
Blackwall Tunnel Improvement, 745
Blades, Refractory Nozzle, for High-Temperature Gas Turbines, 251
Turbine, Gold-Coated Molybdenum for, (587)
Blast Furnace Charging, Feeder Car, J. Pohlig Aktiengesellschaft, 772
Block Comparison, Gauge, High-Precision Interferometer, 814
Magnetic Vee, William Urquhart, (968)
Blowers and Compressors, (Patents, 391, 703, 741)
"Bluebird", Hydroplane, L. H. Norris and K. W. Norris, 474 (and Suppt.)
Boat, Aluminium Alloy Fishing, Brooke Marine Ltd., 345
Saunders-Roe "Princess" Flying, G-ALUN Air and Water Performance Tests, (Report, 894)
and Ship Builder, Annual Review, 1957 (Review, 683)
Show, National, 4
Show, National, Engines, 102

BOILERS

Automatic Control for Oil-Fired Boilers, James Gordon and Co., Ltd., 655
Boiler Feed Pump, Ruhrpumpen G.m.b.H., 773
Continuous Slagging Boiler for Padiham Power Station, Simon-Carves Ltd., (626)
Cylindrical Land Steam Boilers, (B.S.I., 369)
La Mont Boiler Conference, 888
Mixed-Pressure Boiler, Maschinenfabrik Buckau R. Wolf A.G., 812
Steel Boilers and Sterilising Plant, (B.S.I., 723)

Boiling Water Reactor, Experimental, at the Argonne National Laboratory, 623, 661, 699
Bolted Joints, Strength Calculations of, M. Boomsma, 674
Bomb Calorimeter, A. Gallenkamp and Co. Ltd., 494
Bomber, British "Olympus" B.01.6, (930)
Bonus, Coal Miners', 308
Books Received, 101, 175, 215, 256, 302, 339, 369, 409, 485, 529, 569, 609, 649, 683, 723, 759, 799, 837, 871, 907, 955, 987

Booth Exhaust Fan Control Device, Spray, Alfred Bullows and Sons, Ltd. 110
"Borazon" Synthetic Diamond-Like Material 815
Boreholes, Underground, Inclinometers for Use in Long, 655
Boring Method of Culvert Construction, Thrust, Costain, John Brown Ltd., 881
Born of Fire—Steel, (Review, 649)
Boron-Treated Steels, Temper Brittleness, 835
Bosuns' Chairs and Scaffolding Cradles, Winch for, Tirfor Ltd., 769
Boundary Conditions in Lubricating Films, D.G. Christopherson, (Letter, 100)
Boxwood Scales, Architects', Engineers' and Surveyors, (B.S.I., 369)
Bradwell Nuclear Power Station, Inauguration of Work, 121
Brake, 60-ton Press, Bronx Engineering Co., Ltd., 684
Brakes, Disc, for Railway Passenger Stock, Girling Ltd., (38)
Brazil, American Research Reactor for, 507
Breaker, Oil Circuit, General Electric Co., Ltd., 56
132kV, 5000MVA Outdoor Oil Circuit, General Electric Co., Ltd., 691
"Brewery Shunters", The Last, (38)

BRIDGES

Centenary of Crumlin Viaduct, 873
Clifton Bridge, Nottingham, Progress, 872
Firth of Forth Road Crossing, 257, (Leading Article, 240)
Flat Slab Railway Overbridge, 915
Grillo Bridge over the Tiber, 582
Lupara and Caifa Road Bridges, Italy, 582
Massiv Brucken, (Report, 529)
Modern Concrete Bridges, 583
Recent Light Engineering Structures, 261
Richmond-San Rafael Bridge, California, (Plate 15, 11.1.57)
Salmesbury Bridge on Preston By-pass, 20
San Niccolo Bridge, Florence, 583
Steel Arch across Volta River, (Plate 2, 4.1.57)
Storms River Bridge, South Africa, 583
Theory of Suspension Bridges, Sir Alfred Pugsley, (Review, 447)
"Thruway" or Tappan Zee Bridge Crossing the Hudson River, New York, (Plate 15, 11.1.57)
Vagli di Sotto Bridge, Tuscany, 582
Volta Bridge, 185

Bridgetown, Barbados, Deep-Water Harbour, 821
Briggs Dispute, 346
Britain's Machinery Exports, 542
Road Programme, 395
Britain and U.S.S.R., Coal in, (Leading Article, 858)
"Britannia" Airliner First Flight, Bristol, (78)
British Coal Utilisation Research Association, Producer Gas Conference, (428)
Columbia, Surveys for Engineering Development, (493)
Columbia-Vancouver Island 138kV Submarine Power Cable, T. Ingledow, R. M. Fairfield, E. L. Davey, K. S. Brazier and J. N. Gibson, 678
Computer Society, Formation, 859
Conference on Automation and Computation, 631
Continental and Russian Engineering Education, A Comparison, C. Jaeger, B. L. Goodlet and A. L. L. Baker, 203, 242
Cycle and Motor Cycle Industries Association, Motorised Pedal Cycles, 848
Defence Policy, 12
Electrical and Allied Manufacturers Association, British Electrical Exports, 553
Electrical Development Association, Electricity in Agriculture, (196); Industrial Lighting Film, (892)
Electrical Exports, 553
Electrical Power Convention, 936
Employers' Confederation, Annual General Meeting, 420
Equipment for Canada, (968)
Gear Manufacturers' Association, Gear Drives for Locomotives, R. G. Jarvis, 783
Hydromechanics Research Association, Open Days, 879
Industrial Measuring and Control Apparatus Manufacturers' Association, Annual Luncheon, (116)
Industries Fair, 684; (Leading Article, 744)
Institute of Management, Education and Training, 581: Financial Information for Employees, 346; Top Management, 733; Trade Unions and Management, 581; Working Plan, 72
Interplanetary Society, Rocket Symposium, 945
Iron and Steel Federation, Annual General Meeting, 500; Annual Report, 667; Steel Industry's Expansion, 657
Iron and Steel Research Association, Effect of Interrupted Loading on Mechanical Properties of Metals, E. W. Evans, 292, 325; Open Days, (314)
Main Line Electrification, Track Circuiting Equipment, Westinghouse Brake and Signal Co., Ltd., 460
Manufacturers, F.B.I. Register, 1957, (Review, 215)
Non-Ferrous Metals Research Association, Annual Report, 638
Nuclear Energy Conference, Broadened Basis, 83
"Olympus" B.01.6 Bomber, (930)
Overseas Trade, 150
Railway Accidents in 1955, 83
Railways, Exhibition of Components Required, 201
Railways, Main Line Diesel-Electric Locomotives, English Electric Co., Ltd., 859
Railways in 1956, 28
Railways, 1,000-h.p. Diesel-Electric Locomotive; English Electric Co., Ltd., 913; Progress of Modernisation Plans, 417; Prototype Passenger Coaches, 228; Track Recording Trolley, 845
Rayon Research Association, Fluid Bed Technique for the Textile Industry, 651
Road Services, New Regulations, 916
Shipbuilding Compendium, 1957, (Review, 683)
Shipbuildings Research Association, Work in 1956, 60
Standards Institution, Aluminium Conductors in Insulated Cables, 67; Aluminium Conductors for Overhead Power Transmission, 269; Aluminium Rivets for Aircraft, 649; Analysing and Testing Coal and Coke, 955; Architects' Engineers' and Surveyors' Boxwood Scales, 369; Asbestos Cement Pressure Pipes, 149; Auxiliaries for Operation of Fluorescent Lamps, 334; British Equipment for Canada, (968); Closed Flash-Point of Petroleum Products, 837; Compressed Asbestos Fibre Jointing, 334; Cylindrical Land Steam Boilers, 369; Dial Test Indicators, 444; Electrical Equipment of Machine Tools, 723; Electroplated Coatings of Silver, 876; Fastening Threads of B.S.P. Sizes, 580; Gas Welding of Wrought Aluminium, 876; Heat Insulating Terms and Methods of Determining Thermal Conductivity, 269; Internal Defects in Castings, Terminology, 649; Iron Castings with Spheroidal or Nodular Graphite, 369; Iron and Steel for Colliery Cage Suspension Gear, 609; Measurement of Air Flow for Compressors and Exhausters, 955; Mechanical Properties of Steels at Elevated Temperatures, 837; Methods of Testing Plastics, 723; Motor Starters and Controllers, 766; Oil-Hardened and Tempered Steel Wire, 110; Organic Baking Impregnating Varnishes for Electrical Purposes, 369; Papers for Electrical Purposes, 269; Parallel Screw Threads of Whitworth Form, 609; Portable Electric Tools, 837; Power-driven Rail-Mounted Tower Cranes, 723; Sensitive Altimeters for Aircraft, 444; Solid Rolled Steel Railway Wheels, 67; Standards Officers' Conference, 783; Standards for Punched Cards, 450; Steel Boilers and Sterilising Plant, 723; Steel Links and Strap Assemblies, 609; Steels, Slabs, Plates, Sections, Bars and Rivets, (Railway Rolling Stock), 444; Tensile Testing of Metals, 580; Testing Vulcanised Rubber, 837; Tests for Use in the Approval of Welders, 649; Thermometers, 955; Tubular Fluorescent Lamps, 225; Vegetable-Tanned Leather Belting, 876
Steel, (Leading Article, 667)
Steel Castings Research Association, New Laboratories, 859, 910
Trade Fair at Helsinki, 733
Universities, Scientific Research, 1955-56, (Review, 215)
'V-8" Engine, Demise, (Leading Article, 782)
Brittle Fracture, Some Notes on, Structural Steels for Warship Building, Sir Victor Sheppheard, 526
Brittleness of Boron-Treated Steels, Temper, 835
Low-Temperature, 647
Broadened Basis of British Nuclear Energy Conference, 83
Brochures and Catalogues, 158, 278, 316, 510, 590, 628, 666, 704, 742, 894, 932, 1006
Brookhaven National Laboratory, 25,000MeV Particle Accelerator, 507
Brown Sub-littoral Seaweeds, Harvesting Machinery for, Philip Jackson, 400
Brucken, Massiv, (Report, 529)
Brushes, Commutator, and Piston Rings, Hydrodynamic Lubrication, W. Lewicki, 84, 122
Budget, 553
Much as Expected, (Leading Article, 551)
Proposals, 381
Representations, 270
Buffers, Hydraulic, for Railway Stock, Dowty Hydraulic Units Ltd., 344
Building Exhibition, International, Berlin, 1957, 310
Frame of Precast Concrete, Nine-Storey, Concrete Ltd., 973
Frame and the Steel Shortage, A. L. L. Baker, 286
Plant Exhibition, (588)
at Southampton, Passenger and Cargo, (Plate 2, 4.1.57)
Steel Frame of Fourteen Storey, Weisbaden, Fried. Krupp Maschinen und Stahlbau Rheinhausen, (Plate 14, 11.1.57)
Structural Steels for Warship, with Some Notes on Brittle Fracture, Sir Victor Shepheard, 526
Buildings, Industrial, Thermal Insulation, 433
Symposium on Corrosion of Metals in, (71)
and Training Centre, Research, 707
Bulk Sugar Carrier "Crystal Gem", 94
Supply Tariff, Central Electricity Authority, 525
Burner, Self-Proportioning Oil, Premier Oil Burners, 380
Burners and Sprayers, (Patents, 589, 932, 1005)
Burst Slugs, Precipitator Unit for Detecting, Plessey Nucleonics Ltd., 58
Bus, Leyland "Atlantean", (Plate 3, 4.1.57)
"Routemaster", (428)
Butt Welder, Band Saw, Elektro-Apparate-Bau G.m.b.H., 851
Buyers Guide, The Engineer, (Review, 256)
By-pass Road, Longton, 840
Second Stage of Neath, 473

C

Cabin, Pressure, Failure in, (Report, 19)
Cabinet, Macmillan's, (Leading Article, 81)
Cabinets, Air-Conditioned Pressurised Assembly, British Manufactured Bearings Co., Ltd., 380
Cable for Remote Control, Electric, Forges et Ateliers de Constructions Electriques de Jeumont, 660
138kV Submarine Power, British Columbia—Vancouver Island, T. Ingledow, R. M. Fairfield, E. L. Davey, K. S. Brazier and J. N. Gibson, 678
Transatlantic Telephone, (Leading Article, 159); Plans for Second, 593; Symposium, 135, 176
Cables, Aluminium Conductors in Insulated, (B.S.I., 67)
Fire Resistant, for Aircraft, W. T. Henleys Telegraph Works Co. Ltd., 407
Manufacture of Mineral Insulated, British Insulated Callender's Cables Ltd., 806
and Rods, Portable Hydraulic Shear, Copelaw Engineering Co., Ltd., 496
Submarine Power, 9
Caesium Clock, 494
Cage Suspension Gear, Colliery, Iron and Steel for, (B.S.I., 609)
Caifa and Lupara Road Bridges, Italy, 582
Calcul Numerique Calcul Physique, (Report, 529)
Calculating Machines, Digital, G. A. Montgomerie, (Review, 529)
Calculations of Bolted Joints, Strength, M. Boomsma, 674
Slide Rule for Hydraulic, 135
Calculator, Analogy Gaz de France, 925
Calder Hall, Gas Sampling Manifold, Richard Klinger Ltd., 219
Nuclear Power Station, (Plate 1, 4.1.57)
Welding, Gordon Brown, (Letter, 300)
Calendars and Diaries, 40
Calibration, Ground Radar, (797)
Centre, Electronic, at the National Bureau of Standards, 852
Calibration of Vibration Pick-ups, Electrodynamic, 586
California, Richmond-San Rafael Bridge, (Plate 15, 11.1.57)
Calorimeter, Bomb, A. Gallenkamp and Co., Ltd., 494
Cambered Supersonic Wings, (664)
Cambridge Arts and Science Course, (Leading Article, 972)
Camera Construction of the Leica, H. G. Conway, 943
Cam-Operated Vice, Associated Steels and Tools Co., Ltd., 845
Cams: Design, Dynamics and Accuracy, H. A. Rothbart, (Review, 215)
Canadian Standards Association, British Equipment for Canada, (968)

CANADIAN ENGINEERING NEWS

British Equipment for Canada, (968)
Canadian Oil Refinery, British Petroleum Co., Ltd., (445)
Pacific Liner 'Empress of Britain", Fairfield Shipbuilding and Engineering Co., Ltd., (Plate 9, 4.1.57)
Engineering Institute, Symposium on the Transatlantic Telephone Cable, 176
Mission to Canadian Oilfields, 770
Portable Sawmill for Canada, Stenners of Tiverton Ltd., 576
Sudbury Nickel Ores, International Nickel Co., of Canada Ltd., (380)
Trends in Canadian Railway Equipment, 673
Water Power, 161

CANALS

Friction Formulae in Rivers and Channels, J. R. D. Francis, 519
Improvements for River Severn and Gloucester and Sharpness Canal, (807)

Capacitors, Fixed: Radio and Electronic Components, G. W. A. Dummer, (Review, 138)
Impregnated Paper, (Report, 1006)
Capacity, Damping, J. V. Harding, 671
Electricity Generation, 9
Capital Investment in Power, 420
Car, Berkeley, (Plate 3, 4.1.57)
Miniature Motor, Henry Meadows Ltd., 419
Problems of the Small Utility, D. Giacosa, 616
Carbide Alloys, High-Temperature Oxidation, 646
Tip Tools, Renewable, Wickman Ltd., 458
Tool for High Tensile Metals, Production Tool Alloy Co., Ltd., 539
Tools, Steel-Cutting, (196)
Tools, Steel-Cutting, Wickman Ltd., 109
Cards, Standards for Punched, 450
Career, Civil Engineering, (314)
Careers—Mechanical Engineering, R. W. Steed: Electrical Engineering, D. O. Bishop, (Reviews, 955)
Cargo and Passenger Building at Southampton, (Plate 2, 4.1.57)
and Passenger Liner "Argyllshire", Greenock Dockyard Co., Ltd., (Plate 10, 4.1.57)
and Passenger Ship "Scillonian", John I. Thornycroft and Co., Ltd., (Plate 11, 11.1.57)
Liner, Air, Sir W. G. Armstrong Whitworth Aircraft Ltd., 228
Liner, "Capetan Cardamilitis", Burntisland Shipbuilding and Engineering Co., Ltd., 60
Liner "City of Colombo", Barclay, Curle and Co., Ltd., 60
Liner "Diomed", Caledon Shipbuilding and Engineering Co., Ltd., 60
Liner "Michael C", 94
Liner "Nyanza" Scotts Shipbuilding and Engineering Co., Ltd., 23
Passenger Liner "Clan Ross", Greenock Dockyard Co., Ltd., 23
Passenger Liner "Norman Prince", Burntisland Shipbuilding Co., Ltd., (Plate 10, 4.1.57)
Ship "Burwah", Coastal, Burntisland Shipbuilding Co., Ltd., (Plate 10, 4.1.57)
Ship "Kaituna", Alexander Stephen and Sons, Ltd., (Plate 10, 4.1.57)
Ship "Oti", Harland and Wolff Ltd., (Plate, 10 4.1.57)
Carrier, Attack Aircraft, U.S.S. "Saratoga", 65
-borne Fighter, Grumman "Tiger", 16
Bulk Sugar, "Crystal Gem", 94
Ore, "Ruth Lake", 96
Carriers, Ocean Iron Ore—Design Considerations, James Lenaghan, 524
Cars by Rail, (930)
and Tractors, Producer Gas Plant for, Aktiebolaget Volvo, 386
Cast-in-Concrete Reactor Tiers, British Thomson-Houston Co., Ltd., 56
Casting Conference, International Pressure Die, 698
Machine, Continuous, for Non-Ferrous Metals, Lobeck Casting Processes Inc., 350
Repair, Metalock (Britain) Ltd., (407)
Castings, Design of Grey Iron, (Report, 339)
Investment, Soluble Wax Cores For, Firth Vickers Stainless Steels Ltd., 578
Iron, with Spheroidal or Nodular Graphite, (B.S.I., 369)
Line Production of Die, Wolverhampton Die Casting Co., Ltd., 453
Production, Iron, 883
Research Laboratory, Steel, 910
Terminology of Internal Defects, (B.S.I., 649)
Castle Donington Power Station, (Plate 2, 4.1.57)
Catalogues and Brochures, 158, 278, 316, 510, 590, 628, 666, 704, 742, 894, 932, 1006
Cathode-Ray Tubes and Electronic Valves, 346
Cathodic Protection, Metal and Pipeline Endurance Ltd., (236)
Cavitation, Effect of, in the Performance of a Series of 16in. Model Propellers, R. W. L. Gawn and L. C. Burrill, 558
Cellulose Wadding Mill at Aylesford, Kimberley-Clark Corporation, 875
Cement and Concrete Association, Research Buildings and Training Centre, 707
Hydrophobic, Cement Marketing Co., Ltd., 204
Pressure Pipes, Asbestos, (B.S.I., 149)
Slag and Masonry, Africa, 383
Works in Qatar, Proposal for, (452)
Census of Production, Northern Ireland, (156)
Centenaries, Ruston and Hornsby Ltd., Henry Sykes Ltd., Round Oak Steel Works Ltd., 983
Centenary of Crumlin Viaduct, 873
of the Free-Piston Atmospheric Gas Engine, 901
Institution of Engineers and Shipbuilders in Scotland, (816)
of Regenerative Furnace, 337
of the Science Museum, (Leading Article, 971)
Central Heating by Low-pressure Hot Water, (Code, 93)
Centre, Electronic Calibration, at the National Bureau of Standards, 852
Lathe, Automatic Loading Device, Monarch Machine Tool Co., 275
Centrifugal Pumps with Mechanical Shaft Seals Girdlestone Pumps Ltd., (540)
Centrifuge, Variable-Speed, Lumpp, 190
Century Ago, Farming Machinery, G. E. Fussell, 981
Twentieth, Impact of Nuclear Energy, T. E. Allibone, 984
Ceramic Cutting Tools, Soderfors Bruk, 888
Chainat Barrage in Thailand, Construction, 448
Chairs, Bosuns', and Scaffolding Cradles, Winch for, Tirfor Ltd., 769
Challenge, Shipbuilding, (Leading Article, 394)
Chamber Level Gauges, Large, 769
Changes in a 50m Mural Tape Standardising Base, L. O. C. Johnson, 632
in Wage Rates, 32, 229, 381
Channel Tunnel: Will it Ever be Driven? Rolt Hammond, 717
Channels and Rivers, Friction Formulae, J. R. D. Francis, 519
Characteristics, Damping, and Elastic Modulus of Iron-Chromium Alloys, 136
Charging, Feeder Car for Blast Furnace, J. Pohlig Atiengesellschaft, 772
Chemical Analysis as Applied to Sewage and Sewage Effluents, Methods, (Review, 255) and Oil Filter, Plenty and Son, Ltd., 460
Inspectorate, 241
Milling, 989
Rubber and Plastics Exhibition, Paris, 190
Chemicals, Pump for Highly Corrosive, Crane Packing Ltd., (751)
Chicago, Enrico Fermi Professorship at the University, 815
Children, Musical Instrument for Deaf-Mute, Philips Research Laboratories, 622
Chimneys, Rust Protection of Steel, Southern Metalife Ltd., (468)
China Trade with 883
Chiswick Flyover, 201
Chromium-Aluminium Steels, 835
Deposition Plant, Heavy, Fescol Ltd., (575)
Iron Alloys, Damping Characteristics and Elastic Modulus of, 136
Manganese-Nickel Heat-Resisting Steels, 646
Manganese Steel, Austenitic, Containing Nitrogen, 337
Nitrided, 137
Steels, Modified 12 Per Cent., 137
Church, Malmesbury Abbey, New Tower Clock, T. R. Robinson, 124
Churchward, George Jackson, (Leading Article, 200); W. A. Tuplin, (Letter, 368)
Circuit Breaker, Air-Blast, for 132kV, Ferguson Pailin Ltd., 533
Breaker, Oil, General Electric Co., Ltd., 56
Breaker, 132kV, 5000MVA Outdoor Oil, General Electric Co., Ltd., 691
Circuiting Equipment, Track, for British Main Line Electrification, Westinghouse Brake and Signal Co., Ltd., 460
Circuits, Printed, Technograph Electronic Products Ltd., 684
Circular Cylindrical Shells, Distribution Method for, J. C. de C. Henderson and E. Kemp, 634
Circulating Pump, Breguet, 190
Circulation, Forced, in Hot Water Heating Systems, (Report, 856)
City and Guilds Institute, New Site, (892); Technical Authorship, (892)
Civil Engineering as a Career, (314)
Engineering Contributions to Shipbuilding, 513
Engineering in 1956, 20, 44
Engineering Models, 992
Engineering Practice, American, (Review, 409)
Engineer's Training Centre, Railway, (588)
Claim, Railway Shopmen's Pay, 733
Claims, Wage, 111
Classification and Construction of Steel Ships, Rules and Regulations, (Review, 409)
Classifier, Air Vortex, for Dry Powders, Sharples Centrifuges Ltd., 378
Clays, Landslides in, A. Collin, (Review, 987)
Clean Air Act, 1956, 89
Air and Mechanical Engineers, Sir Ewart Smith, 328
Air, The Coming Conference, 200
Cleaner, Vortex Air, Investigation of, T. C. Daniels, 358

Figures in Brackets ( ) refer to paragraphs

Cleaning and Degreasing Machine, Ultrasonic Low-frequency, Mullard Ltd., 724
Machine, Dragline Ditch, Whitlock Bros., Ltd., (Plate 8, 11.1.57)
Machines, Ditch, 763
Clearance and Reclamation of Jungle, C. S. L. Frances, 267
Cleveland Iron and Steel Works, Dorman, Long and Co., Ltd., (Plate 5, 11.1.57)
Cliff Quay, Ipswich, 801
Clifton Bridge, Nottingham, Progress, 872
Climbing Crane, Self-erecting, Abelson and Co., (Engineers) Ltd., 225
Crane, Self-Erecting, Leslie and Co., Ltd., 805
Clock, Caesium, 494
New Tower, at Malmesbury Abbey Church, T. R. Robinson, 124
Closed-Cycle Air Turbine for Naval Use, W. Spillman, 995
Closed Flash Point of Petroleum Products, (B.S.I., 837)
Cloth and Paper Plant, Abrasive, English Abrasives Corporation, (1004)
Cluster Mill, Twenty-High, for Rolling Ultra-Thin Strip, Loma Machine Manufacturing Co., 351
Coach Transmissions, Leyland "Tiger Cub", (276)
Coaches, Prototype Passenger, for British Railways, 228

COAL AND COKE

Analysing and Testing Coal and Coke, (B.S.I., 955)
Annual Report, National Coal Board, 381
Coal Face Mechanisation, 883
Iron and Steel in 1956, 62
Miners' Bonus, 308
Production, 229, 581
in the U.S.S.R., and in Britain, (Leading Article, 858)
Colliery Mechanisation, 83
Reorganisation Schemes, Two, 140, 180
European Coal and Steel Community, 897 ; Production in 1956, 348
Flameproof Transformer for Coal Mines, ACEC, 192
Hydraulic Haulage Drive for Coal-cutting Machines, British Jeffrey-Diamond Ltd., 843
National Coal Board's Modernisation Programme, (Plate 4, 11.1.57) ; Report, 916
Proposed Coal-Burning Power Station at Thorpe Marsh, 809
Russian Coal Industry, 445
Self-Advancing Roof Supports for Mechanised Coal Mines, Dowty, 995
Steel Works Coking Plant in Middlesbrough, Dorman Long (Steel) Ltd., 727
Tractor and Trailer Vehicles for Opencast Coal Hauling, Costain Mining Ltd., (Plate 9, 11.1.57)

Coastal Cargo Ship "Burwah", Burntisland Shipbuilding Co., Ltd., (Plate 10, 4.1.57)
Coating, Anti-Corrosion, Jenolite Ltd., (59)
Industrial Floor, South American Minerals and Products Co., Ltd., (156)
Coatings of Silver, Electroplated, (B.S.I., 876)
Cobalt-Tungsten Double Carbide in Hard Metals, 834
Coke and Coal, Analysing and Testing, (B.S.I., 955)
Coking Plant, Steel Works, in Middlesbrough, Dorman Long (Steel) Ltd., 727
Cold Storage Room, Portable, Penfold and Partners, (499)
College, Aeronautics at Imperial, 838
Imperial, Analogue Computer, Sunvic Controls Ltd., 376
Libraries, Technical, 593
Colleges, Durham, 935
Hostels at Technical, 420
Colliery Cage Suspension Gear, Iron and Steel for, (B.S.I., 609)
Cwm, 3,000-h.p. Skip Winder, 55
Explosions, 1857, 592
Lea Hall, Automatic Control for 1,200-h.p. Sinking Winders, 55
Manvers Main, A.C. Winders, General Electric Co., Ltd., 958
Mechanisation, 83
Reorganisation Schemes, Two, 140, 180
Silverwood, D.C. Winder with Control Exciter, General Electric Co., Ltd., 182
Colonial Geology and Minerals, Papers, (264)
Labour Market, Our, 1857, 318
Colonnes en Acier A37, Recherches sur le Flambement de, (Report, 416)
Colour-Light Signalling Installation at Cowlairs, 454
Columbia, British, Surveys for Engineering Development, (493)
Combination Starter, A.C., Square D, Ltd., 570
Combine Harvester Mounted on Ferguson Tractors, Massey-Harris-Ferguson Ltd., (Plate 8, 11.1.57)
Harvester, Self-Propelled, Ransomes, Sims and Jefferies Ltd., (Plate 8, 11.1.57)
Combustion Engines, Internal, (Patents, 39, 237, 277, 315, 353, 391, 469, 549, 627, 741, 779, 817, 855, 931)
"Combustion and Flame", Journal, (527)
Combustion and Heat Transfer in Openhearth Furnace, (Report 970)
Engines, International Congress, (223), 973
Gases, Properties, (Review, 139)
Research Centre at Lincoln, Internal, Ruston and Hornsby Ltd., 761
Safeguard Control, Pearl Controls Ltd., 107
Comment on Strikes, 695
Commercial Agreement for Pressurised-Water Power Plants, 161
Committee, International, for Process Control, 113
on Synthetic Detergents, (179)
Committees, O. R. Tucker, (Letter, 174)
Commonwealth Standards Conference, 433
Communications Equipment, Exhibition of Wide-Band Radio, 266
in Industry, 420
Power System, E. Openshaw Taylor, (Review, 683)
Community, European Atomic, 659
European Coal and Steel, 897
Commutator Brushes and Piston Rings, Hydrodynamic Lubrication, W. Lewicki, 84, 122
Compaction of Concrete by Vibration, J. M. Plowman, 830
Comparator, Precision, for Small Cylindrical Work, J. C. Evans and W. F. Atkins, 716
Comparison, High-Precision Interferometer for Gauge Block, 814
of Continental, Russian and British Engineering Education, C. Jaeger, B. L. Goodlet and A. L. L. Baker, 203
Compendium, British Shipbuilding, 1957, (Review, 683)
Competition, Safety, 888
Complicated Watches and their Repair, Donald De Carle, (Review, 907)
Component Handling at Machines, Fisher and Ludlow Ltd., (677)
Components Required by British Railways, Exhibition, 201
Compound, Scale Removal, Walterisation Co., Ltd., (968)
Compressed Asbestos Fibre Jointing, (B.S.I., 334)
Compression Testing Machine for Concrete, P. J. F. Wright, 639
Compressor, Air, Tractor Mounted, B.E.N. Patents Ltd., (38)
Gas Turbine-Driven, Alfred Bullows and Sons, Ltd., 684
Heavy-Duty Portable, Bristol Pneumatic Tools Ltd., (468)
Mobile Air, Hymatic Engineering Co., Ltd., 71
Compressors, 117
and Blowers, (Patents, 391, 703, 741)
and Exhausters, Measurement of Air Flow, (B.S.I., 955)
Fan, (428)
Fan, Demag A.G., 231
Compulsion, Thermal Insulation by, (Leading Article, 472)
Computation and Automation, British Conference, 631
Computer, Analogue, at Imperial College, Sunvic Controls Ltd., 376
Analogue, Elliott Brothers (London) Ltd., (Plate 7, 11.1.57)
Analogue, Short Brothers and Harland Ltd., (Plate 7, 11.1.57)
Appreciation Course, Ferranti Ltd., (892)
Controlled Milling Machine, Ferranti Ltd., 58
Electro-mechanical, Nash and Thompson Ltd., 541
Electronic Digital, Metropolitan-Vickers Electrical Co., Ltd., 455
Laboratory, Research, Washington University, (351)
Microscope for Gauging Tree Growth, 423
Production of Trade Names, 503
Techniques, Analog, Clarence L. Johnson, (Review, 256)
Computers, An Industrial Application,—Machine Loading, Ferranti Ltd., C. M. Berners-Lee, 169 (Letter, 446) ; G. H. Room, (Letter, 368)
Analogue, Short Brothers and Harland Ltd., 725
Electronic Analog, G. A. and T. M. Korn, (Review, 256)
Electronic Digital, Metropolitan-Vickers Electrical Co., Ltd., 725

CONCRETE

Cast-in-Concrete Reactor Tiers, British Thomson-Houston Co., Ltd., 56
Compaction of Concrete by Vibration, J. M. Plowman, 830
Compression Testing Machines for Concrete, P. J. F. Wright, 639
Concrete Aggregates from Fly Ash, 707
Congress of the Precast Concrete Industry, 812
Heavy Precast Concrete Structural Work, 372
Hydrophobic Cement, Cement Marketing Co., Ltd., 204
International Conference on Prestressed Concrete, (142)
Congress on Prestressed Concrete, (156)
Massive Bracken, (Report, 529)
Modern Concrete Bridges, 583
Modifications in a Precast Concrete Works, Modular Concrete Co., 496
Nine-Storey Building Frame of Precast Concrete, Concrete Ltd., 973
Photographic Exhibition of Concrete Structures, (854)
Prestressed Concrete in the Netherlands, 231
Concrete Runways, 319
Projection Planetarium and Shell Construction, Walther Bauersfeld, 755, 796
Proposal for a Cement Works in Qatar, (452)
Recent Light Engineering Structures, 261
Reinforced Concrete Structures, Exhibition of Photographs, 935
Research Buildings and Training Centre, Cement and Concrete Association, 707
Rilem Symposium on Winter Concreting, (Review, 955)
Slag and Masonry Cement, Africa, 383
Spannbetonbau, (Report, 447)
Symposium on Shell Roof Construction, (428)
Ultimate Strength Design in Reinforced Concrete, 110
Wire for Prestressed Concrete, British Ropes Ltd., (930)

Condenser Design, Nomogram for Steam, J. P. Duncan, 642
Large Synchronous, Ateliers de Secheron, 926
Conditions in Lubricating Films, Boundary, D. G. Christopherson, (Letter, 100)
for Unstable Rupturing of a Wide Plate, G. M. Boyd, 644
Conductivity, Methods of Determining Thermal, and Heat Insulating Terms, (B.S.I., 269)
Conductors, Aluminium, for Overhead Power Transmission, (B.S.I., 269)
Aluminium, in Insulated Cables, (B.S.I., 67)
Conduits, Pipes and Tubes, (Patent, 893)
Conference, Advanced Aeronautical Education, 488
on Automation and Computation, British, 631
Broadened Basis of British Nuclear Energy, 83
on Clean Air, Coming, (Leading Article, 200)
Commonwealth Standards, 433
on Education for Industry, (778)
International, on Prestressed Concrete, (142)
International Pressure Die Casting, 698
La Mont Boiler, 888
Producer Gas, (423)
on Soil Mechanics, International, 110
Standards Officers', 783
Statistics, Shipbuilding, (252)
Structural Engineering, (588)
World Power, 960; Eleventh Sectional Meeting, 386; Sectional Meeting, (38)
Congress on Combustion Engines, International, 973
on Ground Movements, European, 417
Heating and Ventilation, 923
Instruments and Automation, 773
International, on Combustion Engines, (223)
International Mechanical Engineering, 622
on Irrigation, International, 37
on Large Dams, Sixth, 577
on Lightweight Construction, 348
of the Precast Concrete Industry, 812
International, on Prestressed Concrete, (156)
for the Promotion of Work and Workers, International, 923
Consideration of Weight Transfer on B-B Electric Locomotives, E. H. Croft, 172
Construction of the Chainat Barrage in Thailand, 448
and Classification of Steel Ships, Rules and Regulations, (Review, 409)
Congress on Lightweight, 348
Integral, for Road Vehicles, (Plate 3, 4.1.57)
of the Leica Camera, H. G. Conway, 943
Low-Grade Materials, for Road, F. W. Ingle, 615
Missile, Bulletin No. 173, (901)
Naval, in 1956, 29, 65, 92
Press Shop, Briggs Motor Bodies Ltd., 650
Projection Planetarium and Shell, Walther Bauersfeld, 755, 796
of Secondary Treatment Plant at the L.C.C.'s Northern Outfall, 610
Symposium on Shell Roof, (428)
Thrust Boring Method of Culvert, Costain John Brown Ltd., 881
Consulting Engineers in Industry, (38)
Consumption of Ferrous Scrap in West Germany, 348
Forecasts, Electric Power, (Report, 256)
Petroleum, (276)
of Smoke upon Railways, 1857, 42
Swiss Pulpwood, 735
Contact Indicator, Direction des Etudes et Fabrications D'Armement, 924
Precision, Centre National D'Etudes de Telecommunications, 924
Containers, Floating, Arbeitskreis Amphibischer Verkehr, 811
for Goods Transport, Light Alloy, Tracons Ltd., (437)

CONTINENTAL ENGINEERING NEWS

Abatement of Water Pollution, 622
Alloy Tubing, Heraeus Hanau, 811
All-Wheel-Drive Diesel Truck, Ford Motor Company, 385
Angle Testing Instrument, Carl Zeiss, 811
Anglo-German Trade, 420
Anglo-Polish Trade Agreement, 32
Aus Produktion und Entwicklung (Report, 339)
Automatic Air Filter, A. B. Svenska Flakfabriken, 386
Autorail Express Trains Between Paris and Zurich, 869
Band Saw Butt Welder, Elektro-Apparate-Bau G.m.b.H., 851
Bauersfeld, Professor, James Watt Medal, 232
Boiler Feed Pump, Ruhrpumpen G.m.b.H., 773
Breguet 755 "Deux Ponts" Transporter Aircraft, 884
Centrifuge, Variable-Speed, Lumpp, 190
Ceramic Cutting Tools, Soderfors Bruk, 888
Circulating Pump, Breguet, 190
Comparison of Continental, Russian and British Engineering Education, C. Jaeger, B. L. Goodlet and A. L. L. Baker, 203, 242
Compound-wound Three-phase A.C. Motor, Siemens-Schuckertwerke, 232
Computer Microscope for Gauging Tree Growth, 423
Production of Trade Names, 503
Congress on Lightweight Construction, 348
of the Precast Concrete Industry, 812
Consumption of Ferrous Scrap in West Germany, 348
Contact Indicator, Direction des Etudes et Fabrications D'Armement, 924
Continuous Mill, Phoenix-Rheinrohr, 504
Crane Crab, Schiess-Defries Hebezeug und Kranbau G.m.b.H., 811
Curved Track Plate Conveyor, Demag A.G., 925
Diaphragm Pump, Pelletier, 190
Diesel Shunting Locomotive for the Swedish State Railways, 272
Trains, Six-axle Twin-Car, Linke-Hofmann-Busch, 926
Disc Grinder, High Speed, Otto Suhner G.m.b.H., 964
Droplet Counter, Institut D'Optique Theorique et Appliquee, 924
Duplex Quenching Press, W. Ferd, Klingelnberg, 232
Electric Analogy Calculator, Gaz de France, 925
Cable for Remote Control, Forges et Ateliers de Constructions Electriques de Jeumont, 660
Energy Statistics for Europe, (Report, 224)
Locomotives, "E41", Henschel and Sohn, (Plate 13, 4.1.57)
Power Services in Europe, (Report, 256)
Electro-pneumatic Controller, Allgemeine Electricitats-Gesellschaft, 812
Engineering in 1956,33, 73
Euratom Report, 772
European Atomic Community, 659
Coal and Steel Community, 897 ; Production in 1956, 348
Congress on Ground Movements, 417
Free Trade, (Leading Article, 668)
Free Trade Area, (Leading Article, 239)
Gas Economy, (Report, 339)
Office of Armour Research Foundation, 272
University Interchange, 959
Exhibits at the Chemical, Rubber and Plastics Exhibition, Paris, 190
Extrusion Press, 8,000-ton, Hydraulik, 851
Facsimile Telewriter, Siemens und Halske Aktiengesellschaft, 771
Fan Compressors, Demag A.G., 231
High-pressure Axial-flow, A. B. Svenska Flaktfabriken, 230
Federation Europeenne de la Manutention, 423
Feeder Car for Blast Furnace Charging, J. Pohlig Aktiengesellschaft, 772
Ferry Boat "Gripen", Aalborg Vaerft A/S, (Plate 13, 4.1.57)
Finnish Flour Mill, 309
First Flight of Ram Jet "Griffon 02", SNCAN, 999
Flameproof Transformer for Coal Mines, ACEC, 192
Flicker Generator, Electricite de France, 924
Floating Containers, Arbeitskreis Amphibischer Verkehr, 811
"Flying Atar" C-400 P-2 Vertical Take-off Aircraft, 922
Fouga Jet Trainer, 884
Frankfurt Battelle Institute, Annual Report, 735
French Atomic Factory at Marcoule, (Plate 14, 4.1.57)
Experimental Railcar, 584
Locomotive Experiences, J. T. Van Riemsdijk, (Letter, 138)
Railways' Modernisation Plan, 621
Shipbuilding in 1956, 310
Submarine, "Narval", 92
Frequency Meter-Chronometer, S.A. Rochar Electronique, 924
Friction Winder, Gutehoffnungshutte Sterkrade A.G., 771
Future Demand for Oil in Western Europe, 112
Galvanometer Relay, A.O.I.P., 464
Gear Deburring Machine, Gebr. Boehringer G.m.b.H., 386
Geesthacht Pumped Storage Scheme, 543
"Gerfaut" Delta Aircraft, 884
German Goods Wagons, 384
Handicrafts and Trade Fair, 735
Loudspeaker System at Paris Opera, 464
Machinery Production, 464
Nuclear Power, 773
Nuclear Power Plants, 423
Oil-Fired Locomotives, 584
Study Tour, (428)
Gersteinwerk Power Station at Stockum, (Plate 12, 4.1.57)
Grinder, Universal, F.lli Lizzini, 925
Heat Exchanger, Carbone-Lorraine, 190
Heating and Ventilation Congress, 923
Heavy Water Separation Process, 503
Hobbing Machine for Small Cyclo-Palloid Bevel Gears, W. Ferd, Klingelnberg Sohne, 845
Hob Testing Machine, W. Ferd, Klingelnberg Sohne, 385
Holland America Liner "Statendam" ; Wilton-Fijenoord N.V., 886
Hurel-Dubois Military Transport Aircraft, 884
Hydraulic Transmission, Kieler Howaldtswerke A.G., 999
Transmissions, Hydromatic, G.m.b.H., 812
Hydrostatic Coupling, Zahnraderfabrik Renk A.G., 812
Gearbox, S.p.A. Cambi Idraulici Badalini, 113
Industry and European Free Trade, 308
Infra-Red Dryer, 622
Instrument for Perspective Drawing, Franz Kuhlmann, 273
Instruments and Automation Congress, 773
Integration of European Trade, 462
Internal Coolant Feed for Grinding Wheels, 423
International Building Exhibition, Berlin, 1957, 310
Committee for Process Control, 113
Congress for the Promotion of Work and Workers, 923
Course in Hydraulic Engineering, 310
Cybernetics Association, Congress, 584
Mechanical Engineering Congress, 622
Pressure Die Casting Conference, 698
Italian Hydro-Electric Resources, (Plate 13, 11.1.57)
"Jindivik" Target Aircraft, Fairey Aviation Co., Ltd., 922
Kuibyshev Hydro-Electric Power Station, 421
Laboratory for Flight Physiology, 812
La Mont Boiler Conference, 888
Leak Detector, Compagnie Francaise Thomson-Houston, 925
Liege Fair, Ninth International, 232, 850
Lille International Trades Fair, 272
Liquid Hydrogen Production, Laboratories D'Electrostatique de Physique du Metal, 924
Petroleum Gas Plant in Austria, BP Benzin und Petroleum A.G., 544
Lockheed C-130 "Hercules" Medium Transport Aircraft, 922
Loudhailer, Self-Contained Portable, Den Norske Hoyttaler-Fabrikk A/S, 850
Machine Tool Automation, Centre des Recherches Scientifiques Industrialles et Maritimes de Marseille, 924
Magnetic Dynamic Gramophone Pick-up, Philips Research Laboratories, 191
Mandrel Lift Truck, Maschinenfabrik Esslingen, 771
Mixed-Pressure Boiler, Maschinenfabrik Buckau R. Wolf A.G., 812

Mobility of Labour in Western Europe, 191
Modern Concrete Bridges, 583
Mountain Transport Facilities in Switzerland, 464
Multi-Channel Radio-Telephone Link for Portugal, Automatic Telephone and Electric Co., Ltd., 149
Musical Instrument for Deaf-Mute Children, Philips Research Laboratories, 622
"Mystere" Jet Fighter, 884
Netherlands Destroyer "Friesland", 92
"Noratlas" 2502 Aircraft, 884
Northrop SM-62 "Snark" Offensive Pilotless Weapon, 922
Nuclear Energy Conference, 113
Marine Propulsion, 660
Oil Gas Accumulators, Bolenz und Schafer, 812
Hydraulic Multi-Purpose Press, Becker and Van Hullen, 885
Storage in Sweden, 348
Tanker "George F. Getty", 545
Ore-handling Facilities at Port of Narvik, (Plate 14, 11.1.57)
Oscillograph, Laboratoire D'Electrotechnique et D'Electronique Industrielle, 924
Photo-elastic Equipment, Societe Photostress, 925
Pinch Valve, Dosapro, 190
Portable Gas Detector, Dragerwerk Heinr. and Bernh., 423
Portal Crane, 3-ton, M.A.N., (Plate 14, 11.1.57)
Portuguese Railway Electrification, 151
Power Station for West Germany, 15MW Nuclear, Mitchell Engineering Ltd., 575
Precision Contact, Centre National D'Etudes De Telecommunications, 924
Press for Aircraft Components, 15,000-ton, G. Siempelkamp and Co., Maschinenfabrik, 545
Pressure Transducers, O.N.E.R.A., 925
Prestressed Concrete in the Netherlands, 231
Producer Gas Plant for Cars and Tractors, Aktiebolaget Volvo, 386
Productivity and Local Co-operation, 152
Quarry Shovel, Menck and Hambrock G.m.b.H., 504
Railcars, High-speed, for the Moroccan Railways, De Dietrich et Cie, 230
Railway Crane, 120-ton, Fried. Krupp, 734
Developments in France and Germany, 73
Recording Galvanometer, Bazin and Setton, 273
Remote Controlled Target Plane "CT-20", 922
Rourkela Steel Works, 347
Russian Water Power, 849
Safety Competition, 888
Salon Internationale de l'Aeronautique, 884, 923
Scientific Instruments, Fifty-Fourth Exhibition of French, 924
"SE210 Caravelle" Jet Transport Aircraft, 922
Ships Launched, Gothenburg, 232
Solid Wheel and Disc Mill, Schloemann A.G., 347
"Stahl und Eisen", Anniversary, (78)
Steam Turbine, 150MW, M.A.N., 734
Steel Frame of Fourteen-storey Building, Weisbaden, Fried. Krupp Maschinen und Stahlbau Rheinhausen, (Plate 14, 11.1.57)
Lock for Tie Wires, Cuno Schuckhaus K.G., 385
Production in the Saar, 192
String Oscillograph, S.E.F.R.A.M., 925
Sud Aviation S.E.3130 "Alouette II" Helicopter ; SO. 1221 "Djinn" Helicopter, 923
Supersonic Jet Fighters, SAAB-35, (Plate 13, 4.1.57)
Surface Finish Measuring Instrument, Hommelwerke G.m.b.H., 348
Surge Arrester, 380kV, Siemens-Schuckertwerke, 232
Generator, High-Voltage, Forges et Ateliers de Constructions Electriques de Jeumont, 503
Swedish American Liner "Gripsholm", Societe Ansaldo, 963
Cylinder Lock, 272
Swiss Pulpwood Consumption, 735
Synchronous Condenser, Large, Ateliers de Secheron, 926
Technology and World Structure, 698
Television Equipment for Testing Welded Pipes, Phoenix Rheinrohr A.G., 772
Trade Fairs, 229
Transformer, Large Mobile, A.E.G., 622
Transistor Meter, Association des Ouvriers en Instruments de Precision, 924
Transistors in Watches, 735
Tube Straightening Machine, Th. Kieserling and Albrecht, 660
Tubular Drill Mast, Salzgitter Maschinen A.G., 811
Turbo-jet Engine, "Atar 9", S.N.E.C.M.A., 923
Utilisation of Patents in Germany, 584
Vacuum Spectrograph, Laboratories de Bellevue, 924
Van de Graaff Accelerator for Liege University, 152
"Vantour" All-Weather Fighter, 884
Vernier Bevel Protractor, MZB Messzeug G.m.b.H., 273
Vertical Steam Engine, Mannesmann-Meer A.G., 811
Wages and Salaries in Switzerland, 545
Water Cooled Rectifiers, Brown, Boveri et Cie, 771
Tractor for Belgian Congo, 273
Turbine for 1,200kW Generator, Escher Wyss G.m.b.H., 734
Welding Exhibition, Essen, 504
Exhibition at Utrecht, 113
Westland "Whirlwind" Helicopter ; "Widgeon" Helicopter, 923
World Power Conference, 960 ; Eleventh Sectional Meeting, 386, Sectional Meeting, (38)
Zuider Zee Reclamation, 997

Continuous Casting Machine for Non-Ferrous Metals, Lobeck Casting Processes Inc., 350
Gauging of Hot-Rolled Steel Strip, Baldwin Instrument Co., Ltd., 573
Mill, Phoenix-Rheinrohr, 504
Mining Machine, Improved, Joy-Sullivan Ltd., 306
Slagging Boiler for Padiham Power Station, Simon-Carves Ltd., (626)
Contour Etching, A. W. Sheppard, 98
Tracing Attachment, Hydraulic, for Turret Lathes, Warner and Swasey Co., 351
Contract for Nuclear-Powered Merchant Ship, Reactor, 891
"Turnkey", Taylor Woodrow Ltd., (892)
Contracts, 38, 116, 156, 196, 236, 276, 314, 352, 390, 428, 468, 508, 548, 588, 626, 664, 702, 740, 778, 816, 854, 892, 968, 1004
Open Pit Working, for Nchanga, 383
for Road Schemes, 935
Contribution a la Determination Mathematique Approchee des Contreintes dans les Plaques, (Report, 856)
Towards Rational Tee Slot Design, H. Fessler, 904
Contributions to Shipbuilding, Civil Engineering, 513
Control, Automatic, for 1,200-h.p. Sinking Winders at Lea Hall Colliery, 55
Automatic Train, (930)
Centre, Motor, General Electric Co., Ltd., 535
Combustion Safeguard, Pearl Controls Ltd., 107
Device, Automatic, for Press Operation, Press Guards Ltd., 188
Device, Spray Booth Exhaust Fan, Alfred Bullows and Sons, Ltd., 110
Electronic, Ekco Electronics Ltd., 765
Exciter for D.C. Winder at Silverwood Colliery, General Electric Co., Ltd., 182
for Oil-Fired Boilers, Automatic, James Gordon and Co., Ltd., 655
Hydraulic Dynamometer for Mine Roof, Dowty Group Ltd., (930)
Industrial Fire, Cape Building Products Ltd., 879
Industrial Process, Elliott Brothers (London) Ltd., 725
Process, International Committee, 113
Remote, Electric Cable, Forges et Ateliers de Constructions Electriques de Jeumont, 660
of Strain-Ageing, 483
Systems, "Magistor" Static, Metropolitan-Vickers Electrical Co., Ltd., 534
Unit, Overspeed, Smiths Industrial Instruments Ltd., 571
Controlled Stretched Plates, James Booth and Co., Ltd., (252)
Controller, Electronic Process, Evershed and Vignoles Ltd., 765
Electronic Speed, Crompton Parkinson Ltd., 766
Electro-pneumatic, Allgemeine Electricitats-Gesellschaft, 812
Indicating, Teddington Industrial Equipment Ltd., 107
Railway Dual Point, Siemens and General Electric Railway Signal Co., Ltd., 379
Unit, Programme, Heenan and Froude Ltd., 571
Controllers, Electronic, Kelvin and Hughes (Industrial) Ltd., 726
and Starters, Motor, (B.S.I., 766)
Convection Forcee sur Paroi Mobile, (Report, 302)
Laminar Free : A New Formula, E. J. Le Fevre, (Letter, 648)
Convention, British Electrical Power, 936
Plastics, (702)
Conventional Aspects of Nuclear Power, H. G. Rickover, 520
Converter Roller, Torque, Eddison Plant Ltd., (757)
Conveyor, Articulated-Steel-Plate, Richard Sutcliffe Ltd., 345
Curved Track Plate, Demag A.G., 925
Portable and Extendable Screw, Opancol Ltd., (508)
Conveyors, The Design of Belt, (Review, 215)
Steel, Wharton (Engineers) Ltd., 227
and Transporters, (Patents, 429, 931)
Coolant Feed for Grinding Wheels, Internal, 423
Passage, Annular, Radial Temperature Distribution, Henry Barrow, 713
Separator, Rapid Magnetic Machines Ltd., 881
Cooler, Forced-Oil Air-Blast Transformer, British Thomson-Houston Co., Ltd., 847
Cooling, Gas, in Power-Producing Nuclear Reactors, R. J. Beale, 974
Transformer, Synthetic Fluids for, P. D. Wilmot and N. G. H. Thomas, 410, 451
Co-ordinate Positioning Machine, Electronically Controlled, Mullard Ltd., 724
Setting, Newall Group Sales Ltd., (930)
Copper Alloys, High-Conductivity, (Report, 447)
Development Association, New Offices, (626)
Industry in Australia, 658
Nickel Alloys at High Temperatures, Tensile Properties, 988
Coreless Induction Furnace, Five-Ton Mains-Frequency, Birlec Ltd., 490
Cores, Soluble Wax, for Investment Casting, Firth Vickers Stainless Steels Ltd., 578
Corrosion, Anti-, Coating, Jenolite Ltd., (59)
Cracking, Stress, and Embrittlement, W. D. Robertson, (Review, 759)
High-Temperature, of Heat-Resisting Steel, 835
of Metals in Buildings, Symposium, (71)
Resistant Paints, E. and F. Richardson Ltd., 461
Corrosive Chemicals, Pump, Crane Packing Ltd., (751)
Fluids, Ejectors, Powell-Duffryn Carbon Products Ltd., (276)
Services, Mechanical Shaft Seal for, Crane Packing Ltd., (86)
Costs, Arc-Welding, (Report, 970)
Manufacturing, 500
of Nuclear Power, Generation, 937
and Prices, 883
and Prices, TVA, George L. Schlaepfer, (Letter, 722)
Stability, 770
Council of Ironfoundry Associations, Iron Castings Production, 883
Counter, Droplet, Institut D'Optique Theorique et Appliquee, 924
Counting and Mixing Equipment, Batch, Sinex Engineering Co., Ltd., (854)
Country Industries Exhibition, (702)
Coupling, Hydrostatic, Zahnraderfabrik Renk A.G., 812
Couplings, Pipe and Tube, (Patents, 665, 817, 970)
Course Beacon, Microwave, 378
Cambridge Arts and Science, (Leading Article, 972)
Computer Appreciation, Ferranti Ltd., (892)
in Hydraulic Engineering, International, 310
Courses, Vacation Training, Shell Petroleum Co., Ltd., (428)
Cover, Welded Aluminium Deep Tank Hatch, Head Wrightson Aluminium Ltd., 379
Coverings, Fire Hazards of Roof, N. C. Strother Smith, (Letter, 836)
Cowlairs, Colour-Light Signalling Installation, 454
Crab, Crane, Schiess-Defries Hebezeug und Kranbau G.m.b.H., 811
Cracking, Stress Corrosion, and Embrittlement, W. D. Robertson, (Review, 759)
Cracks, Fatigue Strength of Specimens Containing Preformed Fatigue, N. E. Frost, 864
Cradles and Bosuns' Chairs, Winch for Scaffolding, Tirfor Ltd., 769
Craft, High-Speed Small, Peter Du Cane, (Review, 409)
Crane Crab, Schiess-Defries Hebezeug und Kranbau G.m.b.H., 811
and Crane Rail Lubrication, Automatic, Centralube Ltd., (809)
Fast-Travelling, K. and L. Steelfounders and Engineers Ltd., 808
120-ton Railway, Fried. Krupp, 734
Self-erecting Climbing, Abelson and Co., (Engineers) Ltd., 225
Self-Erecting Climbing, Leslie and Co., Ltd., 805
3-ton Portal, M.A.N., (Plate 14, 11.1.57)
Cranes and Lifting Appliances, (Patent, 893)
Power-Driven Rail-Mounted Tower, (B.S.I., 723)
Creep-Rupture Properties, Effect of Environment, 647
Cromwell Road Extension, 44
Crossing, Firth of Forth Road, 257, (Leading Article, 240)
Cruiser "Canberra", United States, 30
Crumlin Viaduct, Centenary, 873
Cubicle Switchboard, Brookhirst Switchgear Ltd., 535
Culture and the Science Museum, (Leading Article, 471) ; I.E.C. Delegate, (Letter, 722)
Culvert Construction, Thrust Boring Method, Costain John Brown Ltd., 881
Cupboard Fans, Fume, Woods of Colchester Ltd., (276)
Curtain Walls, Stud Welding Fasteners, 274
Curved Track Plate Conveyor, Demag A.G., 925
Customer and the Strikes, (Leading Article, 630)
Cutting Equipment, Oxygen, for Ship's Deck Beams, British Oxygen Gases Ltd., 253
Film, Gear, W. E. Sykes Ltd., (617)
Machine, Flame, for Steel Strip, British Oxygen Gases Ltd., (276)
Titanium and Titanium Alloys, Oxygen, G. Coates, 132
Tools, Ceramic, Soderfors Bruk, 888
Cwm Colliery, 3,000-h.p. Skip Winder, 55
Cycle, Prospects of the Motor, 497
Cycles, Motorised Pedal, 848
Cyclo-Palloid Bevel Gears, Hobbing Machine for Small, W. Ferd. Klingelnberg Sohne, 545
Cycloid Tooth, Let's Forget, F. E. Lindsay, (Letter, 648) ; W. A. Tuplin, (Letter, 722)
Cylinder to Atmosphere, Discharge from an Engine, R. S. Benson, 946, 976
Lock, Swedish, 272
Cylindrical Land Steam Boilers, (B.S.I., 369)
Shells, Circular, Distribution Method for, J. C. de C. Henderson and E. Kemp, 634
Work, Small, Precision Comparator for, J. C. Evans and W. F. Atkins, 716
Work, Tilting Turning Rolls for Welding, Donald Ross and Partners Ltd., 110

D

DAMS
Construction of the Chainat Barrage in Thailand, 448
Dam, Garrison, and Reservoir, 76
Hiwassee, Tennessee Valley Authority, 76
Sixth Congress of Large Dams, 577

Damping Capacity, J. V. Harding, 671
Characteristics and Elastic Modulus of Iron-Chromium Alloys, 136
"Damtheism", 160 ; W. James, (Letter, 215)
Dartford and Purfleet, Tunnel Under the Thames between, 531
Data-Processing System, Electronic, Elliott Brothers (London) Ltd., 874
Datum Selection in the Drawing-Office, L. P. Wakefield, 675
Deaf-Mute Children, Musical Instrument for, Phillips Research Laboratories, 622
Dearth of Skilled Workmen, 1857, 201
Deburring Machine, Gear, Gebr. Boehringer G.m.b.H., 386
Deck Beams, Oxygen-Cutting Equipment for Ship's, British Oxygen Gases Ltd., 253
Deckhouses and Superstructures, Stresses in, A. J. Johnson, 604
Dedication of Historic Steam Turbo-Generator in U.S., 349
Dee Water Supply Scheme, 47
Deep Tank Hatch Cover, Welded Aluminium, Head Wrightson Aluminium Ltd., 379
Deep-Water Harbour at Bridgetown, Barbados, 821
Deephams Sewage Treatment Works at Edmonton, (Plate 1, 11.1.57)
Defects and Failures of Metals, E. P. Polushkin, (Review, 301)
in Castings, Terminology of Internal, (B.S.I., 649)
Defence Interceptor Aircraft, Sud-Est "Durandal" Target, 16
or Deterrent ? (Leading Article, 356)
Policy, British, 12
Production and Employment, 657
White Paper, 1957, (Leading Article, 552)
Defensive Missiles, de Havilland Propellers Ltd., 694
Degreasing and Cleaning Machine, Low-frequency Ultrasonic, Mullard Ltd., 724
De-Icing Methods, Fokker Aircraft, (156)
Delta Aircraft, Convair "F.102A", 16
Aircraft, "Gerfaut", 884
Aircraft, Nord "Griffon", 16
Demand for Oil in Western Europe, Future, 112
for Steel, 189
Demise of a British "V-8" Engine, (Leading Article, 782)
Density Gauge, Fluid, Ekco Electronics Ltd., 766
Deoxidised Steel, Effect of Sulphur in, 834
Deposition Plant, Heavy Chromium, Fescol Ltd., (575)
Design and Application, Bearing, D. F. Wilcock and E. R. Booser, (Review, 836)
Contribution Towards Rational Tee Slot, H. Fessler, 904
Details, Napier "Gazelle" Gas Turbine, 690
Dynamics and Accuracy of Cams, H. A. Rothbart, (Review, 215)
Handbook for Welding, (Review, 723)
Industrial, 897
Nomogram for Steam Condenser, J. P. Duncan, 642
of Belt Conveyors, (Review, 215)
of Towers, Masts and Pylons, (Report, 339)
Principles of Guided Missile, E. A. Bonney, M. J. Zucrow and C. W. Besserer, (Review, 368)
Technical Progress in Steam Turbine, L. S. Robson, 978
Ultimate Strength, in Reinforced Concrete, 110
Designers, Educating Engineering, 829
Destroyer "Aragua", Venezuelan, 92
Escort "Akebono", Japanese, 92
"Friesland", Netherlands, 92
"Harukaze", Japanese, 92
"Juan Jose Flores", Venezuelan, 92
"Tallinn", Russian, 92
U.S.S. "John Paul Jones", 65
Detecting Burst Slugs, Precipitator Unit for, Plessey Nucleonics Ltd., 58
Detection Equipment for Large Plates, Ultrasonic Flaw, James Booth and Co., Ltd., 692
Detector, Leak, Compagnie Francaise Thomson-Houston, 925
Portable Gas, Dragerwerk Heinr. and Bernh., 423
Detergent Factory, Research Headquarters, Thomas Hedley and Co., Ltd., 956
Detergents, Synthetic, Committee, (179)
Determination of Moisture in Solids, (Report, 302)
Deterrent, Air, (Leading Article, 668)
or Defence, (Leading Article, 356)
Detonations, Nuclear, Global Distribution of Radioactivity, 233
Detwisting and Stretching Machine for Extruded Sections, Fielding and Platt Ltd., 958
Developing, Technical Education, Sir Harold Roxbee Cox, 433
Development of Fairground Machinery, Further Notes, P. W. Bradley, 437
in India, Industrial, 917
and Research, Aircraft, Elliott Brothers (London) Ltd., 161
Developments, Technical, in Electricity Supply, 9
Dial Test Indicators, (B.S.I., 444)
Diamond-Like Material, "Borazon" Synthetic, 815
Diamond Mines, Williamson, Power Station, 373
Diaphragm Pump, Pelletier, 190
Diaries and Calendars, 40
Die Casting Conference, International Pressure, 698
Castings, Line Production, Wolverhampton Die Casting Co., Ltd., 453
Diesel Alternator Sets, Metropolitan Water Board, (Plate 5, 4.1.57)
Electric Locomotives for British Railways, Main Line, English Electric Co., Ltd., 859
Electric Locomotives for British Railways, 1,000-h.p., English Electric Co., Ltd., 913
Electric Locomotive for Malayan Railway, 1,500-h.p. Main Line, English Electric Co. Ltd., 574
Electric Paddle Tugs for the Navy, G. W. Tripp, 486
Electric Trains, Main Line, Metropolitan-Cammell Carriage and Wagon Co., Ltd., 521
Engine, "Commodore", Morris Motors Ltd., 102
Engine, High Output, Vauxhall Motors Ltd., 265
Engine, Kelvin "P2", Bergins Co., Ltd., 102
Engine, 9 b.h.p., Stuart Turner Ltd., 102
Engine, "PD4M" Air-cooled, Petters Ltd., 102
Engine, P3(M), F. Perkins Ltd., 102
Engine, Rover 2-Litre, (953)
Engine Test Beds, C. A. V. Ltd., (Plate 6, 11.1.57)
Engine, 2YBM, Ruston and Hornsby Ltd., 102
Engineers and Users' Association, Annual Luncheon, (740)
Engines, Higher Speed, Rover Co., Ltd., 911
Engines, Maintenance of High-Speed, Arthur W. Judge, 528
Governor, Bryce Berger Ltd., (108)
Locomotives, Numbering, (803)
Mechanical Shunting Locomotive, Ruston and Hornsby Ltd., 419
Railcars, Automatic Gear Changing, Self-Changing Gears Ltd., (980)
Railcars for Northern Ireland, 882
Railway Traction, (Leading Article, 472); E. C. Poultney, (Letter, 568)
Shunting Locomotive for the Swedish State Railways, 272
Trains, Six-axle Twin-Car, Linke-Hofmann-Busch, 926
Truck, All-Wheel-Truck, Ford Motor Company, 385
Diffusion and Penetration of Gamma-Rays, 193

Digital Calculating Machines, G. A. Montgomerie, (Review, 529)
Computer, Electronic, Metropolitan-Vickers Electrical Co., Ltd., 455; 725
Diligent Workmanship, (Leading Article, 240)
Direct Drive Engine, Villiers Engineering Co., Ltd., (97)
Water-Cooled Stator Windings for Large Alternators, General Electric Co., Ltd., 878
Direction Frigate, Aircraft, H.M.S. "Salisbury", 29
Measurements, Flow, in Supersonic Wind Tunnels, (Report, 19)
Directory, Electrical Trades, 1957, (Review, 799)
and Handbook, Finishing, 1957, (Review, 799)
of Opportunities for Graduates, (Review, 339)
of Shipowners, Shipbuilders and Marine Engineers, 1957, (Review, 799)
of World Aviation, Interavia ABC, (Review, 799)
Disagreement Amongst the Eminent, (Leading Article, 240)
Disc Brakes for Railway Passenger Stock, Girling Ltd., (38)
Grinder, High-Speed, Otto Suhner G.m.b.H., 964
Mill, Solid Wheel and, Schloemann A.G., 347
Discharge from an Engine Cylinder to Atmosphere, R. S. Benson, 946, 976
Discs, Spinning, Atomisation of Water by, J. R. Pattison and J. D. Aldridge, 514
Display, Scientific Instruments, (196)
Disposals, Lead, (196)
Dispraise and Praise of the "Mechanicals", (Leading Article, 394); (Letter, 484)
Dispute, Briggs, 346
Wage, Shipbuilding and Engineering, 500
Disputes, Industrial, 229, 308, 695
On Trade, 127
Shipbuilding and Engineering, 462
Time Lost Through, 883
Distribution, Global, of Radioactivity from Nuclear Detonations, 233
Method for Circular Cylindrical Shells, J. C. de C. Henderson and E. Kemp, 634
Radial Temperature, in an Annular Coolant Passage, Henry Barrow, 713
Ditch Cleaning Machines, 763
Cleaning Machine, Dragline, Whitlock Bros., Ltd., (Plate 8, 11.1.57)

DOCKS AND HARBOURS

Apapa Wharf, Lagos, (664)
Berth at Tilbury Docks, 973
Cliff Quay, Ipswich, 801
Deep-Water Harbour at Bridgetown, Barbados, 821
Dry Dock at Wallsend, 801
Improvements at Immingham and Barrow Docks, (664)
Ore-handling Facilities at Port of Narvik, (Plate 14, 11.1.57)
Port of Tema, 20
Shoreham Harbour Reconstruction, (Plate 11, 4.1.57)
Union of South Africa Railway and Harbour Developments, 271

Dollar Exports, 346, 848
Domestic Heating, Study, (Report, 601)
Doors, Steel Roll, Golmet Ltd., (188)
Double Chamber Electric Furnace, Royce Electric Furnaces Ltd., 99
Sided Gas-Fired Furnace, Thermic Equipment and Engineering Ltd., 107
Dounreay Atomic Energy Establishment, 747, 784, 823 ; (Leading Article, 781)
Fast Reactor, (Plate 2, 11.1.57) ; Heat Exchanger Banks, John Thompson Ltd., (Plate 3, 11.1.57)
Dragline Ditch Cleaning Machine, Whitlock Bros., Ltd., (Plate 8, 11.1.57)
12 cubic yard Walking, Ransomes and Rapier Ltd., (Plate 9, 11.1.57)
Drawbench, Automatic Triple-draw High-speed, Head Wrightson Machine Co., Ltd., (Plate 4, 4.1.57)
Drawing, Freehand, and Pictorial Illustration for Draughtsmen, W. H. Kerry, (Review, 569)
Instrument, Perspective, Franz Kuhlmann, K.G., 273
Office, Datum Selection, L. P. Wakefield, 675
Office Handbook, R. W. Stuart Mitchell, (Review, 648)
Office, The Role of, (Leading Article, 629)
Stand, M.B.C. (Office Systems) Ltd., 915
Dredger, Grab Hopper, "Samuel Armstrong", Henry Robb Ltd., (Plate 11, 11.1.57)
Dressers, Grinding Wheel, Danite Hard Metals Ltd., (31)
Drier and Adsorber, Helium, for "Dido" Research Reactor, British Oxygen Engineering Ltd., 654
Driers, Air, Lightfoot Refrigeration Co., Ltd., (664)
Drill Mast, Tubular, Salzgitter Maschinen A.G., 811
Rotary, Atlas Copco (Great Britain) Ltd., 656
Two-Speed Portable Electric, Wolf Electric Tools Ltd., 694
Drilling and Soldering Applications, Ultrasonic Generator for, Mullard Ltd., 228
Drip-proof Squirrel-Cage Motors with Class-E Insulation, Newman Industries Ltd., 343
Drive, Direct, Engine, Villiers Engineering Co., Ltd., (97)
Hydraulic Haulage, for Coal-Cutting Machines, British Jeffrey-Diamond Ltd., 843
Variable Speed, Lancashire Dynamo Electronic Products Ltd., 726
Drives, Hydrokinetic Fluid, J. G. Giles, 104
for Locomotives, Gear, R. G. Jarvis, 783
V-Belt, British Tyre and Rubber Co., Ltd., (993)
Droplet Counter, Institut D'Optique Theorique et Appliquee, 924
Drought in the Great Plains of the United States, 349
Dry Dock at Wallsend, 801
Powder Fire Extinguisher, Nu-Swift Ltd., 541
Powders, Air Vortex Classifier for, Sharples Centrifuges Ltd., 378
Dryer, Infra-Red, 622
Drying Equipment, High Pressure Air, Birlec Ltd., 70
Dual Point Controller, Railway, Siemens and General Electric Railway Signal Co., Ltd., 379
Duplex Quenching Press, W. Ferd. Klingelnberg, 232
Durham Colleges, 935
Dynamic Gramophone Pick-up, Magnetic, Philips Research Laboratories, 191
Yield Strength of Steels, 482
Dynamics, Design and Accuracy of Cams, H. A. Rothbart, (Review, 215)
Engineering, C. B. Biezeno and R. Grammel, (Review, 175)
of Machinery, James B. Hartman, (Review, 954)
Post-Graduate School of Applied, 957
Dynamique, Stabilite, des Reseaux Interconnectes, Sur La, (Report, 134)
Dynamometer, Hydraulic, for Mine Roof Control, Dowty Group Ltd., (930)

E

Early and Prehistoric Iron in the Old World, Notes, H. H. Coghlan, (Review, 101)
Earnings, Average, 542
Earthmover Tyres, Giant, Dunlop Rubber Company, (664)
Easily Cleaned Rotary Pumps, Plenty and Son, Ltd., (413)
Ebbw Vale Steel Works, Richard Thomas and Baldwins Ltd., (Plate 5, 11.1.57)
Economic Problems and Policies, 346
Report, 72
Economics of Speed, Lord Douglas of Kirtleside, 291
Economy, European Gas, (Report, 339)
Eddystone Steam Power Station, 736, 774
Edinburgh, University, Post-Graduate School of Applied Dynamics, 957
Edmonton, Deephams Sewage Treatment Works, (Plate 1, 11.1.57)
Educating Engineering Designers, 829
Education, Advanced Aeronautical, (428); H. A. Mettam, (Letter, 608) ; Conference, 488
Comparison of Continental, Russian and British, C. Jaeger, B. L. Goodlet and A. L. L. Baker, 203, 242
Developing Technical, Sir Harold Roxbee Cox, 433
Developments, Engineering, Vickers Ltd., 498
for Engineers, Russian, (Leading Article, 317)
Higher Technological, Report, 173
for Industry, Conference, (778)
Liberalising, (Leading Article, 857)
in the Soviet Union, Engineering, 340
Technical, 788
and Training, 581
and Training of Naval Architects and Marine Engineers, 253
Effect of Cavitation in the Performance of a Series of 16in. Model Propellers, R. W. L. Gawn and L. C. Burrill, 558
of Environment on Creep-Rupture Properties, 647
of Interrupted Loading on Mechanical Properties of Metals, E. W. Evans, 292, 325, 419
of Sulphur in Deoxidised Steel, 834
of Superstructures on the Longitudinal Strength of Ships, J. B. Caldwell, 604
Efficiencies of C.E.A. Power Stations, 580
Efficiency, Fuel, J. R. Rylands, 687
Mechanical, 540
Effluents, Sewage, Methods of Chemical Analysis as Applied to Sewage, (Review, 255)
Ejectors for Corrosive Fluids, Powell-Duffryn Carbon Products Ltd., (276)
Elastic Modulus and Damping Characteristics of Iron-Chromium Alloys, 136
Elasticity, Fracture and Flow, with Engineering and Geological Applications, J. C. Jaeger, (Review, 139)

ELECTRICAL ENGINEERING

A.C. Combination Starter, Square D, Ltd., 570
Railway Electrification, 55
Switchgear, J. R. Mortlock, (Review, 254)
A. E. G. Hilfsbuch fur Elektrische Licht-und Kraftanlagen, (Report, 894)
Air-Blast Circuit Breaker for 132kV, Ferguson Pailin Ltd., 533
Air-break Switchgear, 11kV, A. Reyrolle and Co., Ltd., 536
Air-cooled Induction Regulator, Laurence, Scott and Electromotors Ltd., 572
Alternator with Voltage Regulator Control System, Arthur Lyon and Co. (Engineers) Ltd., 533
Aluminium Conductors in Insulated Cables, (B.S.I., 67)
Conductors for Overhead Power Transmission, (B.S.I., 269)
Analogue Computer, Elliott Brothers (London) Ltd., (Plate 7, 11.1.57)
Computer, Short Brothers and Harland Ltd., (Plate 7, 11.1.57)
Art and Science of Protective Relaying, C. Russell Mason, (Review, 569)
Aus Produktion und Entwicklung, (Report, 339)
Automatic Flash Welder, Asea Electric Ltd., 534
Auxiliaries for Operation of Fluorescent Lamps, (B.S.I., 334)
Berkeley Nuclear Power Station, 143, 650
British Columbia-Vancouver Island 138kV Submarine Power Cable, T. Ingledow, R. M. Fairfield, E. L. Davey, K. S. Brazier and J. N. Gibson, 678
Electrical Exports, 553
Electrical Power Convention, 936
Calder Hall Nuclear Power Station, (Plate 1, 4.1.57)
Canadian Water Power, 161
Capital Investment in Power, 420
Cast-in-concrete Reactor Tiers, British Thomson-Houston Co., Ltd., 56
Castle Donington Power Station, (Plate 2, 4.1.57)
Central Electricity Authority's Bulk Supply Tariff, 525
Compound-wound Three-phase A.C. Motor, Siemens-Schuckertwerke, 232
Computer-Controlled Milling Machine, Ferranti Ltd., 58
Consideration of Weight Transfer on B-B Electric Locomotives, E. H. Croft, 172
Continuous Slagging Boiler for Padiham Power Station, Simon-Carves Ltd., (626)
Controllers, Electronic, Kelvin and Hughes (Industrial) Ltd., 726
Cubicle Switchboard, Brookhirst Switchgear Ltd., 535
D.C. Winder with Control Exciter at Silverwood Colliery, General Electric Co., Ltd., 182
Dedication of Historic Steam Turbo-Generator in U.S., 349
Diesel Alternator Sets, Metropolitan Water Board, (Plate 5, 4.1.57)
Direct-Water-Cooled Stator Windings for Large Alternators, General Electric Co., Ltd., 878
Double Chamber Electric Furnace, Royce Electric Furnaces Ltd., 99
Drill, Two-Speed Portable Electric, Wolf Electric Tools Ltd., 694
Drip-proof Squirrel-Cage Motors with Class-E Insulation, Newman Industries Ltd., 343
Eddystone Steam Power Station, 736, 774
Effect of Nuclear Power on C.E.A. 275kV Transmission System, 721
Efficiencies of C.E.A. Power Stations, 580
Electric Cable for Remote Control, Forges et Ateliers de Constructions Electriques de Jeumont, 660
Energy Statistics for Europe, (Report, 224)
Gear Selection, 106
Locomotives Ordered for British Railways, 513
Power Consumption Forecasts, (Report, 256)
Power Gallery at the Science Museum, 783
Welding Plant and Electrode Factory, Lincoln Electric Co., Ltd., 757
Electrical and Allied Plant, Monopolies and Restrictive Practices Commission's Report, 335
Engineering, (Patent, 1005)
Engineering and Aluminium, (303)
Engineering, Careers, D. O. Bishop, (Review, 955)
Engineering in 1956, 9, 55
Engineering Training, I.E.E. Report, 161
Engineers' Exhibition, 533, 570
Machinery in a Phosphorus Factory, General Electric Co., Ltd., 492
Power for Industry, (Leading Article, 972)
Production of Music, Alan Douglas, (Review, 722)
Trades Directory, 1957, (Review, 799)
Electricity in Agriculture, Film, (196)
Undertakings of the World, (Review, 101)
Electrification Extension to Southend-on-Sea (Victoria), 4, 68
of the Severn Tunnel Pumping Station, 319
Electrodynamic Calibration of Vibration Pick-ups, 586
Electro-mechanical Computer, Nash and Thompson Ltd., 541
Electronic Analog Computers, G. A. and T. M. Korn, (Review, 256)
Calibration Centre at the National Bureau of Standards, 852
Control, Ekco Electronics Ltd., 765
Data-Processing System, Elliott Brothers (London) Ltd., 874
Digital Computers, Metropolitan-Vickers Electrical Co., Ltd., 455, 725
Megaphone, Pye Telecommunications Ltd., 228
Printer for Aerial Photographic Negatives, Cintel-Television Ltd., 914
Process Controller, Evershed and Vignoles Ltd., 765
Reading Automation, Solartron Electronic Business Machines Ltd., 414
Speed Controller, Crompton Parkinson Ltd., 766
Valves and Cathode-Ray Tubes, 346
Variable Speed Drive, Lancashire Dynamo Electronic Products Ltd., 726
Electronically-controlled Co-ordinate Positioning Machine, Mullard Ltd., 724
Electronics Exhibition, (352)
Fire Resistant Cables for Aircraft, W. T. Henleys Telegraph Works Co., Ltd., 407
Five-Ton Mains-Frequency Coreless Induction Furnace, Birlec Ltd., 490
Fixed Capacitors : Radio and Electronic Components, G. W. A. Dummer, (Review, 138)
Flameproof Electric Fork Truck, Conveyancer Fork Trucks Ltd., 684
Transformer for Coal Mines, ACEC, 192
Floating Stations for Nuclear Power Plants, F. H. E. Myers, (Letter, 214) ; A. P. Mason, (Letter, 338)
Fluid Network Analyser, Nash and Thompson Ltd., 765
Forced-Oil Air-Blast Transformer Cooler, British Thomson-Houston Co., Ltd., 847
Fuseboard, "Red Spot" Metal-clad, English Electric Co., Ltd., 571
Gas Cooling in Power-Producing Nuclear Reactors, R. J. Beale, 974
Turbine Power Station, Venezuela, Ruston and Hornsby Ltd., 618
General Theory of Electrical Machines, Bernard Adkins, (Review, 609)
Generating Plant Installed in C.E.A. Power Stations in 1956, 70
Generation Capacity, 9
Costs of Nuclear Power, 937
of Electricity by Wind Power, (Report, 1006)
Germanium Rectifiers in Industry, 57
Gersteinwerk Power Station at Stockum, (Plate 12, 4.1.57)
Glass Melting Furnaces, Electric, British Heat Resisting Glass Co., Ltd., 57
Great Britain's 6000MW Nuclear Power Programme, 357
Hams Hall Power Station, (Plate 8, 4.1.57)
High-Conductivity Copper Alloys, (Report, 447)
High-Frequency Injector for Arc Welding, Metropolitan-Vickers Electrical Co., Ltd., 146
High-voltage Laboratory, Pilkington Brothers Ltd., 56
Hutte IV A. Elektrotechnik, (Review, 683)
Impedance Tester, Phase-earth Loop, Ferranti Ltd., 572
Impregnated Paper Capacitors, (Report, 1006)
Inauguration of Work on Bradwell Nuclear Power Station, 121
Infra-Red Projector, High-Intensity, Metropolitan-Vickers Electrical Co., Ltd., 461
Jahrbuch der Elektrowwarme, (Report, 529)
Kuibyshev Hydro-Electric Power Station, 420, 463
Lightning Arrester, Asea Electric Ltd., 534
Low-frequency Ultrasonic Cleaning and Degreasing Machine, Mullard Ltd , 724
Waveform Generator, Servomex Controls Ltd , 767
Machine Tools, Electrical Equipment, (B.S.I , 723)
"Magistor" Static Control Systems, Metropolitan-Vickers Electrical Co., Ltd., 534
Manufacture of Fractional Horsepower Motors, British Thomson-Houston Co., Ltd., 614
of Mineral Insulated Cables, British Insulated Callender's Cables Ltd., 806
Marchwood Power Station, 908
Marine Electrical Installations, A. N. Savage, (619)
Mass Spectrometer, Metropolitan-Vickers Electrical Co , Ltd , (Plate 7, 11.1.57)
Mechanical Strength of Power Transformers in Service, E. T. Norris, 331
Mobile Workshops for Servicing Power Station Equipment, British Thomson-Houston Co , Ltd , 580
Monopoly in the Electrical Industry, (Leading Article, 355)
Motor Control Centre, General Electric Co., Ltd., 535
"JC" Totally enclosed, Newman Industries Ltd., 570
Starters and Controllers, (B.S.I., 766)
Multi-Channel Radio-Telephone Link for Portugal, Automatic Telephone and Electric Co., Ltd., 149
Multiple-Unit Electric Trains on London Midland Region, 844
"No-Break" Alternator Set for Standby Power Supply, Lister-Blackstone, 912
Nuclear Power Station for West Germany, 15MW, Mitchell Engineering Ltd., 575
Reactions and Power Development, Sir John Cockcroft, 418
Oil Circuit Breaker, General Electric Co., Ltd., 56
On-Load Tap-Changer, Metropolitan-Vickers Electrical Co., Ltd., 534
Operating Experience at Calder Hall, 241
Organic Baking Impregnating Varnishes for Electrical Purposes, (B.S.I., 369)
Oscillographic Observation of Short Duration Arcs, (Report, 1006)
Outdoor Oil Circuit Breaker, 132kV, 5000MVA General Electric Co., Ltd., 691
Overspeed Control Unit, Smiths Industrial Instruments Ltd., 571
Padiham "B" Power Station, (968)
Papers for Electrical Purposes, (B.S.I., 269)
Patents, 39, 79, 157, 237, 315, 353, 469, 549, 589, 627, 855, 893, 931, 969
Photo-Transistor Relay, Metropolitan-Vickers Electrical Co., Ltd., 579
Plymouth "B" Power Station Extension, (97)
Portable Electric Tools, (B.S.I., 837)
Portuguese Railway Electrification, 151
Power Services in Europe, Electric, (Report, 256)
Station at Williamson Diamond Mines, 373
System Communications, E. Openshaw Taylor, (Review, 683)
Transformer, 400kV, British Thomson-Houston Co., Ltd., 845
Transformers, Standard Telephones and Cables Ltd., 572
Printed Circuits, Technograph Electronic Products Ltd., 684
Programme Controller Unit, Heenan and Froude Ltd., 571
Progress at Berkeley Nuclear Power Station, 991
Proposed Coal-Burning Power Station at Thorpe Marsh, 809
Pusher Furnace for Powder Metallurgy, General Electric Co., Ltd., 915
Railway Electrification, (Letter, 485)
Regenerative Glass Furnace, United Glass Bottle Manufacturing Co., Ltd., 57
Relay Activated by Electrorestrictive Deformation, Metropolitan-Vickers Electrical Co., Ltd., 541
Reorganisation Proposals for Electricity Supply Industry, 9
Rider Controlled Electric Fork Truck, Lansing-Bagnall Ltd., (468)
Rockslide at Schoelkopf Power Station, 77
Scotland's First Nuclear Power Station, 216, 260
Smoke Indicator and Alarm Unit, Lancashire Dynamo Electronic Products Ltd., 726
Sodium Graphite Reactor Electric Power Plants, 424
Squirrel-cage Motors, Crompton Parkinson Ltd., 571
Stabilite Dynamique des Reseaux Interconnectes, Sur La, (Report, 134)
Standard A.C. Motors, Improved Range, Crompton Parkinson Ltd., 109
Range of Generating Sets, Newage (Manchester) Ltd., 538
Streamlined Specification Standards, Vol. 11, Electrical and Mechanical, (Review, 409)
Submarine Power Cables, 9
Surface Leakage Problems on High-Voltage Insulators, 387
Surge Arrester, 380kV, Siemens-Schuckertwerke, 232
Generator, High-Voltage, A. Hill, (Letter, 648)
Generator, High-Voltage, Forges et Ateliers de Constructions Electriques de Jeumont, 503

Generators, Electrical Research Association, 533
Synchronous Condenser, Large, Ateliers de Secheron, 926
Synthetic Fluids for Transformer Cooling, P. D. Wilmot and N. G. H. Thomas, 410, 451
Technical Developments in Electricity Supply, 9
Test Transformer, Foster Transformers Ltd., 56
Tilbury "A" Power Station, (Plate 8, 4.1.57)
Track Circuiting Equipment for British Main Line Electrification, Westinghouse Brake and Signal Co., Ltd., 460
Transatlantic Telephone Cable, 59 ; (Leading Article, 159 ; Symposium, 135
Transformer, Large Mobile, A.E.G., 622
Single-Phase, 15kVA Pole- Mounting, Partridge Wilson and Co., Ltd., 570
Transistor Manufacture, Mullard Ltd., 909
Tubular Fluorescent Lamps, (B.S.I., 225)
Turbo-Generators, 200MW, for Willington "B" Power Station, Metropolitan-Vickers Electrical Co., Ltd., 173
275kV System of the Central Electricity Authority, F. J. Lane, 565
Uganda Electricity Board Programme, (588)
Ultrasonic Generator for Drilling and Soldering Applications, Mullard Ltd., 228
Ventilated Squirrel-Cage Motors with Class-E Insulation, English Electric Co., Ltd., 306
Voltage Stabiliser, Philips Electrical Ltd., 571
Water Cooled Rectifiers, Brown, Boveri et Cie, 771
Turbine for 1200kW Generator, 734
Welding at Calder Hall, Gordon Brown, (Letter, 300)
Working to a Programme, (Leading Article, 393)

Electrical Research Association, Annual Luncheon, 707
A.C. Railway, 55
Extension to Southend-on-Sea, (Victoria), 4,68
Portuguese Railway, 151
Electrode Factory and Electric Welding Plant, Lincoln Electric Co., Ltd., 757
Electrodeposits, Applications of, 835
Electrodynamic Calibration of Vibration Pick-ups, 586
Electro-mechanical Computer, Nash and Thompson Ltd., 541
Electronic Analog Computers, G. A. and T. M. Korn, (Review, 256)
Calibration Centre at the National Bureau of Standards, 852
Control, Ekco Electronics Ltd., 765
Controllers, Kelvin and Hughes (Industrial) Ltd., 726
Data-Processing System, Elliott Brothers (London) Ltd., 874
Digital Computer, Metropolitan-Vickers Electrical Co., Ltd., 455
Instruments and Automation, 724, 765
Megaphone, Pye Telecommunications Ltd., 228
Printer for Aerial Photographic Negatives, Cintel-Television Ltd., 914
Process Controller, Evershed and Vignoles Ltd., 765
and Radio Components, Fixed Capacitors, G. W. A. Dummer, (Review, 138)
Reading Automation, Solartron Electronic Business Machines Ltd., 414
Speed Controller, Crompton Parkinson Ltd., 766
Valves and Cathode-Ray Tubes, 346
Electronically-Controlled Co-ordinate Positioning Machine, Mullard Ltd., 724
Electronics Exhibition, (352)
Electroplated Coatings of Silver, (B.S.I., 876)
Elevated Temperatures, Mechanical Properties of Steels at, (B.S.I., 837)
Embrittlement, Stress Corrosion Cracking, W. D. Robertson, (Review, 759)
Emergency Energy Sources, Hymatic Engineering Co., Ltd., 807
Eminent, Disagreement Amongst, (Leading Article, 240)
Employees, Financial Information for, 346
Employment and Defence Production, 657
and Unemployment, 111, 308, 420, 581, 770, 959
Encyclopaedia of the Iron and Steel Industry, A. K. Osborne, (Review, 837)
Endurance, Engine, B.S.A. Motor Cycles, Ltd., (778)
Energy, Atomic, Exhibition for Australia, 513
Dounreay Atomic, Establishment, 747, 784, 823
Electric, Statistics for Europe, (Report, 224)
Engineering Problems in the Application of Nuclear, Sir Claude D. Gibb, 282, 320
Sources, Emergency, Hymatic Engineering Co., Ltd., 807
World, Power Production : The Practical Application, Hans Thirring, (Review, 139)
Engineer, The, Buyers Guide, (Review, 256)
Engineering, Agricultural, (Patent, 855)
Analysis, Stephen H. Crandall, (Review, 338)
Applications, Thin-Walled Bearings for Heavy, Glacier Metal Co., Ltd., (468)
as a Career, Civil, (314)
Civil, Contributions to Shipbuilding, 513
Civil, in 1956, 20, 44
Conference, Structural, (588)
Congress, International Mechanical, 622
Designers, Educating, 829
Development in British Columbia, Surveys, (493)
Dynamics, C. B. Biezeno and R. Grammel, (Review, 175)
Education Developments, Vickers Ltd., 498
Education in the Soviet Union, 340
Electrical, (Patents, 39, 237, 353, 469, 549, 589, 627, 855, 893, 931, 969, 1005
Electrical, and Aluminium, (303)
Electrical,—Careers, D. O. Bishop, (Review, 955)
Electrical, in 1956, 9, 55
Foundation, (Review, 930)
and Geological Applications, Elasticity, Fracture and Flow, J. C. Jaeger, (Review, 139)
Hydraulic, International Course, 310
Industries Association, Export Procedure, (892)
Institute of Canada, Symposium, Transatlantic Telephone Cable, 135
Marine, (Patents, 469, 509, 627, 703)
Marine, and Shipbuilding in 1956, 23, 60, 94
Marine, Welding and Nuclear Energy Exhibition, (156)
Mechanical,—Careers, R. W. Steed, (Review, 955)
Mining, (Patents, 157, 469)
Models, Civil, 992
in 1956, Continental, 33, 73
Practice, American Civil, (Review, 409)
Problems in the Application of Nuclear Energy, Sir Claude D. Gibb, 282, 320
Railway, (Patents, 117, 277, 741, 931)
Research Progress in the Union of South Africa, 383
Scholarships, Agricultural, (314)
and Shipbuilding Disputes, 462
and Shipbuilding Wage Dispute, 500
and Shipbuilding Wages, 399, 542, 733, 770, 848
Soil, in Frost Areas, (701)
Structural Failures, Rolt Hammond, (Review, 649)
Structures, Analysis, A. J. S. Pippard and J. F. Baker, (Review, 682)
Structures, Recent Light, 261
Teaching Production, in Universities, 189
Training, Electrical, I.E.F. Report 161
Uses of Rubber, A. T. McPherson and Alexander Klemin, (Review, 683)
Wages, (Leading Articles, 705, 820)
Engineers in America, Shortage, 75
Architects' and Surveyors' Boxwood Scales, (B.S.I., 369)
Directory of Shipowners, Shipbuilders and Marine, 1957, (Review, 799)
Exhibition, Electrical, 533, 570
Guild, Professional Engineers, 420
Handbook, Water, 1957, 995
in Industry, Consulting, (38)
Institute, Nuclear, T. Johnson, (Letter, 907)
Institutions of, 1857, 706
Marine, and Naval Architects, Education and Training, 253
A Mathematical Tool-kit for, H. A. Webb and D. G. Ashwell, (Review, 723)
Mechanical, and Clean Air, Sir Ewart Smith, 328
Mechanical, Practical Training, 395
and Metallurgists, (Leading Article, 119)
Modern Mathematics, Edwin F. Beckenbach, (Review, 302)
Professional, J. G. Orr, 420
Russian Education for, (Leading Article, 317)
Status of, J. G. Orr, 446; (Letter, 408)
Theory of Vibrations for, E. B. Cole, (Review, 447)
Training Centre, Railway Civil, (588)
Year Book, 1957, Kempe's, (Review, 101)
Engines, Air-Cooled Oil, Ruston and Hornsby Ltd., 499
Analysis, Gas, Edward A. Bruges, 790
Applications of Oil, Rolls-Royce Ltd., 769
"Argosy" 200-h.p., Ajax Marine Engines Ltd., 102
"Atar 9" Turbo-jet, S.N.E.C.M.A., 923
Centenary of the Free-Piston Atmospheric Gas, 901
Combustion, International Congress, (223, 973)
"Commodore" Diesel, Morris Motors Ltd., 102
"Conway", Rolls-Royce Ltd., (1004)
Cylinder to Atmosphere, Discharge from, R. S. Benson, 946, 976
Demise of a British "V-8", (Leading Article, 782)
Diesel, Kelvin "P2", Bergins Co., Ltd., 102
Direct Drive, Villiers Engineering Co., Ltd., (97)
Endurance, B.S.A. Motor Cycles Ltd., (778)
Fire, and Ship Pump, How's, 1857, 630
Forsyth's Improvements in Locomotive, 1857, 972
High Output Diesel, Vauxhall Motors Ltd., 265
Higher Speed Diesel, Rover Co., Ltd., 911
Hydrogen, (Report, 496)
Hydro-Pneumatic, E. F. Clark, (Letter, 648)
Hydro-Pneumatic, 1857, 280
Internal Combustion, (Patents, 39, 237, 277, 315, 353, 391, 469, 549, 627, 741, 779, 817, 855, 931
Lightweight Fighter, Bristol "Orpheus B Or 3", (854)
Maintenance of High-Speed Diesel, Arthur W. Judge, 528
Manual, Oil, D. S. D. Williams, (Review, 446)
at the National Boat Show, 102
9-b.h.p., Diesel, Stuart Turner Ltd., 102
Parts, Jet, "Hydrospin" Machine for Forming, Cincinnati Milling Machine Co., 275
"PD4M" Air-cooled Diesel, Petters Ltd., 102
P3(M) Diesel, F. Perkins Ltd., 102
Railway Locomotives, Traction, Geoffrey W. King, (Letter, 300) ; A. L. Lambert, (Letter, 682) ; Stephen B. Fletcher, (Letter, 758)
Range, Rationalised, Ford Motor Co., Ltd., 802
Rover 2-Litre Diesel, (953)
Starting Aid, Power Frequency Heating Ltd., 847
Test Beds, Diesel, C.A.V. Ltd., (Plate 6, 11.1.57)
Testing, Helicopter, Alvis Ltd., 264
2YBM Diesel, Ruston and Hornsby Ltd., 102
"Vedette" Petrol, Morris Motors Ltd., 102
Vertical Steam, Mannesmann-Meer A.G., 811
Engravings, Wood, (Leading Article, 82)
Enrico Fermi Professorship at the University of Chicago, 815
Entwicklung, Aus Produktion und, (Report, 339)
Environment, Effect of, on Creep-Rupture Properties, 647
Equipment Exhibition, Factory, (221), 593
Exhibition, Marine, Carron Company, (382)
Escort, Japanese Destroyer "Akebono", 92
Essential Factors in the Future Development of the Oil Industry, G. Sell, (Review, 529)
Estimates for the Fighting Services, (Leading Article, 743)
Estuary Investigations, Thames, (Leading Article, 895)
Pollution in the Thames, 631
Silting in the Thames, 859
Etching, Contour, A. W. Sheppard, 98
Etude Theorique et Experimentale de la Stabilite des Chambres d'Elulibre Situee en Aval D'Une Galerie en Charge Alimentee par un Canal a Ecoulement Libre, (Report, 856)
Euratom Report, 772
Europe, Electric Energy Statistics, (Report, 224)
Electric Power Services, (Report, 256)
Timber Industry, (Report, 932)
Western, Future Demand for Oil, 112
Western, Mobility of Labour, 191
European Atomic Community, 659
Coal and Steel Community, 698, 897
Congress on Ground Movements, 417
Free Trade, (Leading Article, 668)
Free Trade Area, (Leading Article, 239)
Free Trade and Industry, 308
Gas Economy, (Report, 339)
Office of Armour Research Foundation, 272
Trade, Integration, 462
University Interchange, 959
Evaporation Loss from Reservoirs, Experiments to Reduce, (468)
Excavating Machine, Wartime, 395
Excavation, Modern Techniques, H. L. Nichols, (Review, 955)
Exchanger Banks, Heat, for Dounreay Fast Reactor, John Thompson Ltd., (Plate 3, 11.1.57)
Heat, Carbone-Lorraine, 190
Exciter Control for D.C. Winder at Silverwood Colliery, General Electric Co., Ltd., 182
Exhaust Fan Control Device, Spray Booth, Alfred Bullows and Sons, Ltd., 110
Exhausters and Compressors, Measurement of Air Flow, (B.S.I., 955)

EXHIBITIONS

American National Automobile Show, 193
Atomic Energy Exhibition for Australia, 513
British Industries Fair, 684
Railways, Exhibition of Components Required, 201
Trade Fair at Helsinki, 733
Building Plant Exhibition, (588)
Chemical, Rubber and Plastics Exhibition, Paris, 190
Continental Trade Fairs, 229
Country Industries Exhibition, (702)
Electrical Engineers' Exhibition, 533, 570
Electronics Exhibition, (352)
Engineering, Marine, Welding and Nuclear Energy, (156)
Engines at the National Boat Show, 102
Exhibitions of Inventions, 1857, 473
Factory Equipment Exhibition, (221), 593
Gas at Work in Industry, 107
German Handicrafts and Trade Fair, 735
Huyghens Tercentenary Exhibition, T. R. Robinson, 87
Instruments, Electronics and Automation, 724, 765
International Building Exhibition, Berlin, 1957, 310
Geophysical Year, (778)
Liege Fair, Ninth International, 232, 850
Lille International Trades Fair, 272
Machinery of the Paris Exhibition, 1857, 782
Manufacturer's Machine Tool Exhibition, B. Elliott and Co., Ltd., (508)
Marine Equipment, Carron Company, (382)
National Boat Show, 4
Not a British Industires Fair, (Leading Article, 744)
"Open Skies for Peace", 43
Packaging Exhibition, 121
Photographic Exhibition of Concrete Structures, (854)
Physical Society Exhibition, (428), 494
Plastics Convention, (702)
Railway Travel Exhibition, (968)
Reinforced Concrete Structures, Photographs, 935
Salon Internationale de l'Aeronautique, 884, 923
Scientific Instruments Display, (196)
Instruments, Fifty-Fourth Exhibition of French, 924
Telford Exhibition, (854)
Welding Exhibition, Essen, 504
Exhibition at Utrecht, 113
Wide-Band Radio Communications Equipment Exhibition, 266

Expanding from a Low Initial Quality, Supersaturation in Steam, Denis J. Ryley, 708
Expansion, Steel Industry, 657
Experience at Calder Hall, Operating, 241
Experiences, French Locomotive, J. T. Van Riemsdijk, (Letter, 138)
Experiment Begins Operation, U.S. Sodium Reactor, 967
Experimental Boiling Water Reactor at the Argonne National Laboratory, 623, 661, 699
Low-Energy Reactor, "NERO", 499
Railcar, French, 584
Submarine "Explorer", 30
Tank, Ship Model, 145
Experiments at Woolwich, 1857, 553
Explosions, Colliery, 1857, 592
Export of American Research Reactor to Japan, 75
Packaging, E. H. (Service Depot) Ltd., 958
Policy, Steel, 72
Procedure, (892)
Requirements, 381
Trade Monthly Figures, 229
Trends, 189
Exports, Agricultural Machinery, 620
Britain's Machinery, 542
British Electrical, 553
Dollar, 346, 848
Steel and Iron, (196)
Exposition, International Atomic, at Philadelphia, 889, 927, 965, 1000
Express Locomotive Trials on the Western Region, O. S. Nock, 560, 594
Passenger Locomotive, "King" 4-6-0, (Plate 7, 4.1.57)
Trains Between Paris and Zurich, Autorail, 869
Extension of Electrification to Southend-on-Sea (Victoria), 4, 68
Extensions, Plymouth "B" Power Station, (97) to a Stockton Works, Ashmore Benson Pease and Co., 880
Extinguisher, Dry Powder Fire, Nu-Swift Ltd., 541
Fire, Pyrene Co., Ltd., (854)
Extinguishers for Metal Fires, Pyrene Co., Ltd., (221)
Extraction Fan, Hot Fume, Keith Blackman Ltd., 107
Plants, Solvent, Iwel Ltd., 459
Extruded Sections, Stretching and Detwisting Machine, Fielding and Platt Ltd., 958
Extrusion Press, 8,000-ton, Hydraulik, 851
Extrusions, Production of Stepped Aluminium Alloy, in the United States, 114

F

Fabric for Waterproofing, Reinforcing, Fothergill and Harvey (Sales) Ltd., (854)
Facilities for Small Manufacturers, Loan, 150
Facsimile Telewriter, Siemens und Halske Atiengesellschaft, 771
Factories Act, Inside the Fence, 832
Royal Ordnance, 189, 745
Sponsorship Schemes in Remploy, Remploy Ltd., 303
Thermal Insulation, George T. Noble, (Letter, 568)
Factory, Electric Welding Plant and Electrode, Lincoln Electric Co., Ltd., 757
Electrical Machinery in a Phosphorus, General Electric Co., Ltd., 492
Equipment Exhibition, (221), 593
Extension, Birmingham, Phosphor Bronze Co., Ltd., 859
French Atomic, at Marcoule, (Plate 14, 4.1.57)
Hinge Making, Thomas Crompton and Sons, Ltd., 693
and Industrial Law, (196)
New, Sharples Centrifuges Ltd., (968)
Reinforced Plastics, Ashdowns, Ltd., 841
Research Headquarters of Detergent, Thomas Hedley and Co., Ltd., 956
Thermal Insulation, Dick's Asbestos and Insulating Co., Ltd., 223
Failure in a Pressure Cabin, (Report, 19)
Failures and Defects of Metals, E. P. Polushkin, (Review, 301)
Engineering Structural, Rolt Hammond, (Review, 649)
Gear, of Ball, Tube and Rod Mills, H. E. Rose, 522
Plain Bearing, P. P. Lover, (694)
Fair, British Industries, 684, (Leading Article, 744)
German Handicrafts and Trade, 735
at Helsinki, British Trade, 733
Lille International Trades, 272
Ninth International Liege, 232, 850
Fairbairn Locomotives, Some, E. C. Poultney, 305
Fairey "Delta 2", R. L. Lickley and L. P. Twiss, 297
Fairground Machinery, Further Notes on the Development, P. W. Bradley, 437
Fairs, Continental Trade, 229
Fan Compressors, (428)
Compressors, Demag A.G., 231
Control Device, Spray Booth Exhaust, Alfred Bullows and Sons, Ltd., 110
High-pressure Axial-flow, A. B. Svenska Flaktfabriken, 230
Hot Fume Extraction, Keith Blackman Ltd., 107
Fans, Fume Cupboard, Woods of Colchester Ltd., (276)
P.V.C. Fume Removal, Keith Blackman Ltd., (105)
Faraday House Old Students Associations, Scholarships, (740)
Medal and Honorary Membership, I.E.E., 83
Farming Machinery a Century Ago, G. E. Fussell, 981
Fast Reactor at Dounreay, (Plate 2, 11.1.57)
Reactor, Heat Exchanger Banks for Dounreay, John Thompson Ltd., (Plate 3, 11.1.57)
Travelling Crane, K. and L. Steelfounders and Engineers Ltd., 808
Fasteners for Curtain Walls, Stud Welding, 274
Fastening Threads of B.S.P. Sizes, (B.S.I., 580)
Fatigue Laboratory, Short Brothers and Harland Ltd., (276)
of Metals, (Review, 871)
of Metals and Structures, H. J. Grover, S. A. Gordon and L. R. Jackson, (Review, 101)
Strength of Specimens Containing Preformed Fatigue Cracks, N. E. Frost, 864
Tests, Prot, on High-Strength Steel, 989
Federation of British Industries, Annual General Meeting, 620 ; Industry and Petrol Rationing, 43 : Register of British Manufacturers, 1957, (Review, 215) ; Scholars' Dinner, (Leading Article, 552)
Europeenne de la Manutention, 423
Feed for Grinding Wheels, Internal Coolant, 423
Pump, Boiler, Ruhrpumpen G.m.b.H., 773
Feeder Car for Blast Furnace Charging, J. Pohlig Aktiengesellschaft, 772
Feeding Equipment, Automatic, for Nut Welding Machine, Rhoden Partners Ltd., 767
Fellowships, Robert Blair, in Science and Technology, (156)
Fence, Inside the, (Factories Act), 832
Ferrous Scrap Consumption in West Germany, 348
Ferry Boat "Gripen", Aalborg Vaerft A/S, (Plate 13, 4.1.57)
Festival of Industrial Films, 319
Fibre Aircraft Seat, Glass, Microcell Ltd., (719)
Jointing, Compressed Asbestos, (B.S.I., 334)
Fighter, All-weather, P.1B, English Electric Co., Ltd., 618
Engine, Lightweight, Bristol "Orpheus B Or 3", (854)
Grumman "Tiger" Carrier-Borne, 16
McDonnell "Voodoo" Single-seat, 16
"Mystere" Jet, 884
Policy, (Leading Article, 279)
Supermarine N.113, Fleet, (156)
"Vantour" All-Weather, 884
Vickers "Supermarine" 544, (Plate 6, 4.1.57)
Fighters, Supersonic Jet, SAAB-35, (Plate 13, 4.1.57)
Fighting Services, Estimates, (Leading Article, 743)
Figures, Monthly, Export Trade, 229

Film on Air Travel, (702)
Apapa Wharf, Lagos, (664)
Gear Cutting, W. E. Sykes Ltd., (617)
Industrial Lighting, (892)
Oil Tanker "Spyros Niachos", (221)
Processing Equipment, Kodak Ltd., 269
Production of Steel, United Steel Companies Ltd., (664)
Films, Festival of Industrial, 319
Lubricating, Boundary Conditions in, D. G. Christopherson, (Letter, 100)
Filter, Automatic Air, A. B. Svenska Flaktfabriken, 386
Oil and Chemical, Plenty and Son, Ltd., 460
Wet Washer, Keith Blackman Ltd., 684
Financial Information for Employees, 346
Finishing Handbook and Directory, 1957, (Review, 799)
Finnish Flour Mill, 309
Fire, Born of,—Steel, (Review, 649)
Control, Industrial, Cape Building Products Ltd., 879
Engine and Ship Pump, How's, 1857, 630
Extinguisher, Dry Powder, Nu-Shift Ltd., 541
Extinguisher, Pyrene Co., Ltd., (854)
Fighting Tender, Two, Merryweather and Sons, Ltd., 498
Hazards of Roof Coverings, N. C. Strother Smith, (Letter, 836)
"Jaguar", Robertson, Thain Ltd., (Letter, 408) ; L. R. Chambers, (Letter, 485)
Protection Association, Annual Report, 996
Resistant Cables for Aircraft, W. T. Henleys Telegraph Works Co., Ltd., 407
Fires, Extinguisher for Metal, Pyrene Co., Ltd., (221)
First Flights, Recent, 809
One Hundred and Fifty Years, John Wiley and Sons Inc., (Review, 723)
Firth of Forth Road Crossing, 257, (Leading Article, 240)
Fishing Boat, Aluminium Alloy, Brooke Marine Ltd., 345
Fixed Capacitors : Radio and Electronic Components, G. W. A. Dummer, (Review, 138)
Flame Cutting Machine for Steel Strip, British Oxygen Gases Ltd., (276)
Flameproof Electric Fork Truck, Conveyancer Fork Trucks Ltd., 684
Transformer for Coal Mines, ACEC, 192
Flash Point, Closed, of Petroleum Products, (B.S.I., 837)
Welder, Automatic, Asea Electric Ltd., 534
Flat Slab Railway Overbridge, 915
Flaw Detection Equipment, Ultrasonic, for Large Plates, James Booth and Co., Ltd., 692
Fleet Fighter, Supermarine N.113, (156)
Flicker Generator, Electricite de France, 924
Flight, High-Speed, E. Ower and J. Nayler, (Review, 101)
Physiology, Laboratory, 812
of Ram Jet "Griffon 02", First, SNCAN, 999
Flights, Recent First, 809
Floating Containers, Arbeitskreis Amphibischer Verkehr, 811
Stations for Nuclear Power Plants, F. H. E. Myers, (Letter, 214) ; A. P. Mason, (Letter, 338)
Floor Coating, Industrial, South American Minerals and Products Co., Ltd., (156)
Florence, San Niccolo Bridge, 583
Flour Mill, Finnish, 309
Flow for Compressors and Exhausters, Measurement of Air, (B.S.I., 955)
Direction Measurements in Supersonic Wind Tunnels, (Report, 19)
Elasticity and Fracture, with Engineering and Geological Applications, J. C. Jaeger, (Review, 139)
Past Swept Wings, Subsonic, (Report, 19)
of Suspensions of Non-Cohesive Spherical Particles in Pipes, H. E. Rose and H. E. Barnacle, 898, 939
Flowmeter Testing, Elliott Brothers (London) Ltd., 227
Fluid Bed Technique for the Textile Industry, 651
Density Gauge, Ekco Electronics Ltd., 765
Drives, Hydrokinetic, J. G. Giles, 104
Network Analyser, Nash and Thompson Ltd., 765
Fluids, Ejectors for Corrosive, Powell-Duffryn Carbon Products Ltd., (276)
Synthetic, for Transformer Cooling, P. D. Wilmot and N. G. H. Thomas, 410, 451
Fluorescent Lamps, Auxiliaries for Operation of, (B.S.I., 334)
Lamps, Tubular, (B.S.I., 225)
Fly Ash, Concrete Aggregates from, 707
Flying Boat, Saunders-Roe "Princess" G-ALUN Air and Water Performance Tests, (Report, 894)
Flyover, Chiswick, 201
Folding and Bending Machine, Scottish Machine Tool Corporation Ltd., 684
Forced Circulation in Hot Water Heating Systems (Report, 856)
Oil Air-Blast Transformer Cooler, British Thomson-Houston Co., Ltd., 847
Forcee, Convection, sur Paroi Mobile, (Report, 302)
Forecasts, Electric Power Consumption, (Report, 256)
Forget the Cycloid Tooth, Let's, F. E. Lindsay, (Letter, 648)
Fork Lift Truck, Matling Ltd., 656
Truck, Flameproof Electric, Conveyancer Fork Trucks Ltd., 684
Truck, Rider Controlled Electric, Lansing-Bagnall Ltd., (468)
Forming Jet Engine Parts, "Hydrospin" Machine, Cincinnati Milling Machine Co., 275
Formulae, Friction, in Rivers and Channels, J. R. D. Francis, 519
Forsyth's Improvements in Locomotive Engines, 1857, 972
Forty-Hour Week, Confederation of Shipbuilding and Engineering Unions, 959
Fouga Jet Trainer, 884
Foundation Engineering, (Review, 930)
Foundries, Safety in Non-Ferrous, 996
Foundry, Large Mechanised, and New Machine Shop, Beans Industries Ltd., 343
Fractional Horsepower Motors, Manufacture, British Thomson-Houston Co., Ltd., 614
Fracture, Elasticity and Flow, with Engineering and Geological Applications, J. C. Jaeger, (Review, 139)
Some Notes on Brittle, Structural Steels for Warship Building, Sir Victor Shepheard, 526
Frame, Building, and the Steel Shortage, A. L. L. Baker, 286
of Fourteen Storey Building, Steel, Weisbaden, Fried. Krupp Maschinen und Stahlbau Rheinhausen, (Plate 14, 11.1.57)
of Precast Concrete, Nine-Storey Building, Concrete Ltd., 973
Frames, Nomograms for the Analysis, J. Rygol, (Review, 987)
Frankfurt Battelle Institute, Annual Report, 735
Fraser River, Lower, Road Tunnel Under, Vancouver, 48
Free-Piston Atmospheric Gas Engine, Centenary, 901
Trade Area, European, (Leading Article, 239)
Trade, European, (Leading Article, 668)
Trade, European, and Industry, 308
Freehand Drawing and Pictorial Illustration for Draughtsmen, W. H. Kerry, (Review, 569)
French Atomic Factory at Marcoule, (Plate 14, 4.1.57)
Experimental Railcar, 584
and German Railway Developments, 73
Locomotive Experiences, J. T. Van Riemsdijk, (Letter, 138)
Nuclear Marine Propulsion, 660
Railways' Modernisation Plan, 621
Scientific Instruments, Fifty-Fourth Exhibition, 924
Shipbuilding in 1956, 310
Submarine "Narval", 92
Frequencies, Microwave, Solid State Oscillator for, Bell Telephone Laboratories, 389
Frequency Meter-chronometer, S. A. Rochar Electronique, 924
Friction Formulae in Rivers and Channels, J. R. D. Francis, 519
and Lubrication, F. P. Bowden and D. Tabor, (Review, 300)
Winder for Coal Mine, Gutehoffnungshutte Sterkrade A.G., 771
Frigate, Aircraft Direction, H.M.S. "Salisbury", 29
Anti-aircraft, "Lynx", 29
Anti-aircraft, "Puma", 29
Anti-submarine "Dundas", 29
Anti-submarine, "Torquay", 29
Anti-submarine, "Whitby", 29
"Riga", Russian, 92
Frost Areas, Soil Engineering, (701)
Fuel Applications, Oil, A. T. Henly, (Review, 871)
Efficiency, J. R. Rylands, 687
Oil and Petrol, 462
Fume Cupboard Fans, Woods of Colchester Ltd., (276)
Extraction Fan, Hot, Keith Blackman Ltd., 107
Removal Fans, P.V.C., Keith Blackman Ltd., (105)
Furnace, "Ajaxomatic" Holding, Birlec Ltd., 684
Assay, Royce Electric Furnaces Ltd., (664)
Centenary of Regenerative, 337
Charging, Feeder Car for Blast, J. Pohlig Aktiengesellschaft, 772
Combustion and Heat Transfer in Openhearth, (Report, 970)
Double Chamber Electric, Royce Electric Furnaces Ltd., 99
Double-Sided Gas-Fired, Thermic Equipment and Engineering Ltd., 107
Electric Glass Melting, British Heat Resisting Glass Co., Ltd., 57
Five-Ton Mains-Frequency Coreless Induction, Birlec Ltd., 490
High-Temperature Vacuum, General Electric Co., Ltd., 655
for Powder Metallurgy, Pusher, General Electric Co., Ltd., 915
Regenerative Glass, United Glass Bottle Manufacturing Co., Ltd., 57
Sealed Quench, Birlec Ltd., 107
Furnaces, Heating, (Patent, 969)
and Ovens, (Patent, 779)
Further Notes on the Development of Fairground Machinery, P. W. Bradley, 437
Fuseboard, "Red Spot" Metal-clad, English Electric Co., Ltd., 571
Future of the Aircraft Industry, 821
Demand for Oil in Western Europe, 112
of Nuclear Power, Sir Christopher Hinton, 442

G

Gallery at the Science Museum, Electric Power, 783
Galvanometer, Recording, Bazin and Setton, 273
Relay, A.O.I.P., 464
Gamma Radiation Laboratory for Lubricants, 877
Rays, Penetration and Diffusion, 193
Garrison Dam and Reservoir, 76
Gas Conference, Producer, (428)
Cooling in Power-Producing Nuclear Reactors, R. J. Beale, 974
Detector, Portable, Dragerwerk Heinr. and Bernh., 423
Economy, European, (Report, 339)
Engine Analysis, Edward A. Bruges, 790
Engine, Centenary of the Free-Piston Atmospheric, 901
Fired Furnace, Double-Sided, Thermic Equipment and Engineering Ltd., 107
Industry, Dr. Glasgow's Contributions, 370
Plant, Liquid Petroleum, in Austria, BP Benzin und Petroleum A.G., 544
Plant, Producer, for Cars and Tractors, Aktiebolaget Volvo, 386
for Railway Trains, Introduction, 1857, 821
Sampling Manifold at Calder Hall, Richard Klinger Ltd., 219

GAS TURBINES

Gas Turbine Design Details, Napier "Gazelle", 690
Turbine-Driven Compressor, Alfred Bullows and Sons, Ltd., 684
Turbine Power Station, Venezuela, Ruston and Hornsby Ltd., 618
Turbines in 1956, 26
Indirect-Fired Gas Turbines, Donald L. Mordell, 210
Industrial Gas Turbine, Standard Motor Co., Ltd., 406
Patents, 117, 197, 277, 509, 779
Refractory Nozzle Blades for High-Temperature Gas Turbines, 251
Regenerative Cycle, Two-shaft Gas Turbine Propulsion Unit, General Electric Company, (Plate 5, 4.1.57)
Steam and Gas Turbines, (Patent, 779)
Strassentahrzeuge mit Gasturbinenantrieb, (Report, 447)
Turbine Relighting, 213
Gas Welding of Wrought Aluminium, (B.S.I., 876)
at Work in Industry, 107
in Yorkshire, Natural, Imperial Chemical Industries Ltd., (185)
Gases, Industrial, Monopolies Commission Report, 72
Properties of Combustion, (Review, 139)
Gauge Block Comparison, High-Precision Interferometer, 814
Fluid Density, Ekco Electronics Ltd., 766
Thickness, Dawe Instruments Ltd., 494
Gauges, Large Chamber Level, 769
Gauging of Hot-Rolled Steel Strip, Continuous, Baldwin Instrument Co., Ltd., 573
Gear Changing, Automatic, on Diesel Railcars, Self-Changing Gears Ltd., (980)
Colliery Cage Suspension, Iron and Steel for, (B.S.I., 609)
Cutting Film, W. E. Sykes Ltd., (617)
Deburring Machine, Gebr. Boehringer G.m.b.H., 386
Drives for Locomotives, R. G. Jarvis, 783
Failures of Ball, Tube and Rod Mills, H. E. Rose, 522
Heat-Treatment Installation, Transmission, David Brown Industries Ltd., 652
Hobbing Machines, Automatic Loading Device, Churchill Gear Machines Ltd., 220
Reversing, D. Guthrie, (Letter, 608) ; P. Wilson, (Letter, 799)
Selection, Electric, 106
Teeth, Permissible Backlash Between, W. A. Tuplin, 951
Gearbox, Hydrostatic, S.p.A. Cambi Idraulici Badalini, 113
Geared System, Start-Stop Time, J. R. Ellis, 902
Gearing, Terminology, Allan H. Candee, (Letter, 484) ; W. A. Tuplin, (Letter, 569) ; A. M. Gunner, (Letters, 758, 836) ; F. E. Lindsay, (Letter, 836)
Gears, Hobbing Machine for Small Cyclo-Palloid Bevel, W. Ferd. Klingelnberg Sohn, 545
Geesthacht Pumped Storage Scheme, 543
General Survey of the Gound Movement Problem, J. T. Whetton, 562
Theory of Electrical Machines, Bernard Adkins, (Review, 609)
Generating Plant Installed in C.E.A. Power Stations in 1956, 70
Sets, Standard Range, Newage (Manchester) Ltd., 538
Generation Capacity, Electricity, 9
Costs of Nuclear Power, 937
of Electricity by Wind Power, (Report, 1006)
Generator, Flicker, Electricite de France, 924
High-Voltage Surge, Forges et Ateliers de Constructions Electriques de Jeumont, 503 ; A. Hill, (Letter, 648)
Low Frequency Waveform, Servomex Controls Ltd., 767
Ultrasonic, for Drilling and Soldering Applications, Mullard Ltd., 228
Van de Graaff, 58
Water Turbine for 1,200kW, Escher Wyss G.m.b.H., 734
Generators, Steam, (Patents, 39, 157, 589, 665, 703, 741, 855)
Surge, Electrical Research Association, 533
Geological and Engineering Applications, Elasticity Fracture and Flow, J. C. Jaeger, (Review, 139)
Geology and Minerals, Papers on Colonial, (264)
Geophysical Year, International, (778), 973
German, Anglo-, Trade, 420
and French Railway Developments, 73
Goods Wagons, 384
Handicrafts and Trade Fair, 735
Loudspeaker System at Paris Opera, 464
Machinery Production, 464
Nuclear Power, 773
Nuclear Power Plants, 423
Oil-Fired Locomotives, 584
Productivity and Local Co-operation, 152
Study Tour, (428)
Germanium Rectifiers in Industry, 57
Germany, Utilisation of Patents, 584
West, Ferrous Scrap Consumption, 348
West, 15MW Nuclear Power Station, Mitchell Engineering Ltd., 575
Gersteinwerk Power Station at Stockum, (Plate 12, 4.1.57)
Giant Earthmover Tyres, Dunlop Rubber Company, (664)
Glass Fibre Aircraft Seat, Microcell Ltd., (719)
Furnace, Regenerative, United Glass Bottle Manufacturing Co., Ltd., 57
Melting Furnaces, Electric, British Heat Resisting Glass Co., Ltd., 57
Pipelines, Industrial, James A. Jobling and Co., Ltd., 415
Reinforced Plastic, Structural Application, Mendip (Chemical Engineering) Ltd., 380
Global Distribution of Radioactivity from Nuclear Detonations, 233
Gloucester and Sharpness Canal, Improvements for River Severn and, (807)
Gloves, Heat and Abrasion Resistant Protective, George Angus and Co., Ltd., (930)
Gold-Coated Molybdenum for Turbine Blades, (587)
Goods Depot for Barking Area, (588)
Transport, Light Alloy Containers, Tracons Ltd., (437)
Wagons, German, 384
Governor, Diesel, Bryce Berger Ltd., (108)
Grab Hopper Dredger "Samuel Armstrong", Henry Robb Ltd., (Plate 11, 11.1.57)
Grading Sands and Powders, Hydraulic Separators for, Millars' Machinery Co., Ltd., 187
Graduate Students and Research Workers, D.S.I.R. Grants, 121
Graduates, Directory of Opportunities, (Review, 339)
Works Training for, (Leading Article, 199)
Gramophone Pick-up, Magnetic Dynamic, Philips Research Laboratories, 191
Grandstand Roof, Aluminium, Johannesburg, 579
Grants for Graduate Students and Research Workers, D.S.I.R., 121
Graphite, Iron Castings with Spheroidal or Nodular, (B.S.I., 369)
Reactor Electric Power Plants, Sodium, 424
Great Bee-Hive, 1857, 668
Britain, Surface Water Yearbook, 1953-54, (Review, 249); 1954-55, (Review, 870)
Britain's 6000MW Nuclear Power Programme, 357
North Road, Reconstruction, (854)
Grey Iron Castings, Design, (Report, 339)
Grillo Bridge over the Tiber, 582
Grinder, High-Speed Disc, Otto Suhner G.m.b.H., 964
Universal, F.lli Lizzini, 925
Grinding Machine, Automatic Internal, Keighley Grinders (M.T.) Ltd., 459
Wheel Dressers, Danite Hard Metals Ltd., (31)
Wheels, Internal Coolant Feed for, 423
Grit Arrester and Smoke Abatement Equipment, Meldrum Flood Page Ltd., 148
Ground Movement Problem, General Survey, J. T. Whetton, 562
Movements Due to Mining, 553
Movements, European Congress, 417
Radar Calibration, (797)
Growth, Tree, Computer Microscope for Gauging, 423
Guide, Buyers, The Engineer, (Review, 256)
Guided Missile Design, Principles, E. A. Bonney, M. J. Zucrow and C. W. Besserer, (Review, 368)
Missile Structures, Kinetic Heating in Aircraft and, Metropolitan-Vickers Electrical Co., Ltd., 957
Missile Trial Ship H.M.S. "Girdleness", 30

H

Hams Hall Power Station, (Plate 8, 4.1.57)
Handbook, B.B.C., 1957, (Review, 215)
and Directory, Finishing, 1957, (Review, 799)
Drawing Office, R. W. Stuart Mitchell, (Review, 648)
Water Engineer's, 1957, 995
Handbuch der Werften, 1956, (Review, 409)
Handicrafts and Trade Fair, German, 735
Handling, Component, at Machines, Fisher and Ludlow Ltd., (677)
Equipment, Hose, Mobil Oil Co., Ltd., 379
and Storage, Spares, Ford Motor Company, 653
Harbour, Deep-Water, at Bridgetown, Barbados, 821
Developments, Union of South Africa, 271
Reconstruction, Shoreham, (Plate 11, 4.1.57)
Hard Metal-Faced Mechanical Seals, Crane Packing Ltd., (732)
Metals, Cobalt-Tungsten Double Carbide in, 834
Hardening Attachment, Induction, on an Automatic, B.S.A. Tools Ltd., 619
Harvester, Combine, Mounted on a Ferguson Tractor, Massey-Harris-Ferguson Ltd., (Plate 8, 11.1.57)
Self-Propelled Combine, Ransomes, Sims and Jefferies Ltd., (Plate 8, 11.1.57)
Sugar Beet, John Salmon Engineering Co., Ltd., (Plate 8, 11.1.57)
Harvesting Machinery for Brown Sub-littoral Seaweeds, Philip Jackson, 400
Harwell, Research Reactors, (Plate 2, 11.1.57)
Hatch Cover, Welded Aluminium Deep Hatch, Head Wrightson Aluminium Ltd., 379
Haulage Drive, Hydraulic, for Coal-Cutting Machines, British Jeffrey-Diamond Ltd., 843
Equipment, Railway Wagon, 307
Hay and Straw Baler, International Harvester Company of Great Britain Ltd., (Plate 8, 11.1.57)
Hazards of Roof Coverings, Fire, N. C. Strother Smith, (Letter, 836)
Headquarters of Detergent Factory, Research, Thomas Hedley and Co., Ltd., 956
Heat and Abrasion Resistant Protective Gloves, George Angus and Co., Ltd., (930)
Exchanger Banks for Dounreay Fast Reactor, John Thompson Ltd., (Plate 3, 11.1.57)
Exchanger, Carbone-Lorraine, 190
Insulating Terms and Methods of Determining Thermal Conductivity, (B.S.I., 269)
and Oil Resisting Leather, George Angus and Co., Ltd., (968)
Resisting Steels, Chromium-Manganese-Nickel, 646
Resisting Steels, High-Temperature Corrosion, 835
Transfer and Combustion in Openhearth Furnace, (Report, 970)
Transfer Laboratory, Babcock and Wilcox Ltd., (Plate 3, 11.1.57)
Transfer Laboratory, G.E.C.-Simon-Carves Atomic Energy Group, (Plate 3, 11.1.57)
Treatment Installation, Transmission Gear, David Brown Industries Ltd., 652
Heating, Central, by Low-pressure Hot Water, (Code, 93)
Furnaces, (Patent, 969)
Kinetic, in Aircraft and Guided Missile Structures, Metropolitan-Vickers Electrical Co., Ltd., 957
Study of Domestic, (Report, 601)
Systems, Forced Circulation in Hot Water, (Report, 856)
and Ventilating Industry, Year Book, (Review, 139)
and Ventilation Congress, 923
Heavy Water Separation Process, 503

Helicopter Engine Testing, Alvis Ltd., 264
Sud Aviation S.E.3130 "Alouette II", 923
Sud Aviation SO. 1221 "Djinn", 923
Westland "Whirlwind", 923
Westland "Widgeon", 923
Helium Drier and Adsorber for "Dido" Research Reactor, British Oxygen Engineering Ltd., 654
Helsinki, British Trade Fair, 733
High-Conductivity Copper Alloys, (Report, 447)
Frequency Injector for Arc Welding, Metropolitan-Vickers Electrical Co., Ltd., 146
Head Turbine Test Stand, American, 153
M.E.P.—Low Revs, (Leading Article, 512)
Precision Interferometer for Gauge Block Comparison, 814
Pressure, Hydraulic Lock at, K. J. Whiteman, 554
Speed Flight, E. Ower and J. Nayler, (Review, 101)
Temperature Corrosion of Heat-Resisting Steels, 835
Temperature Laminating Resin, Bakelite Ltd., 689
Temperature Oxidation of Carbide Alloys, 646
Temperature Vacuum Furnace, General Electric Co., Ltd., 655
Tensile Steels, Reamers for, Short Brothers and Harland Ltd., 99
Voltage Insulators, Surface Leakage Problems, 387
Voltage Laboratory, Pilkington Brothers Ltd., 56
Voltage Surge Generator, A. Hill, (Letter, 648)
Higher Speed Diesel Engines, Rover Co., Ltd., 911
Technological Education, Report, 173
Highland Water Power, North of Scotland Hydro-Electric Board, 46
Highway Maintenance, Urban, W. J. Hiscock, 43
Hinge-Making Factory, Thomas Crompton and Sons, Ltd., 693
Historic Steam Turbo-Generator Dedication in U.S., 349
History, Architectural, Railway Station, Carroll L. V. Meeks, (Review, 987)
Studying Technological, (Leading Article, 896)
Hiwassee Dam, Tennessee Valley Authority, 76
Hob Testing Machine, W. Ferd. Klingelnberg Soehne, 385
Hobbing Machine for Small Cyclo-Palloid Bevel Gears, W. Ferd. Klingelnberg Sohne, 545
Machines, Gear, Automatic Loading Device, Churchill Gear Machines Ltd., 220
Holding Furnace, "Ajaxomatic", Birlec Ltd., 684
Hong Kong Airport, Planning, 357
Honours, Birthday, 953
New Year, 15
Hooke's Inventions, R. J. Law, (Letter, 138)
Hopper Dredger, Grab, "Samuel Armstrong", Henry Robb Ltd., (Plate 11, 11.1.57)
Hoppers, Anti-Bridging Device for Storage, Paterson Hughes Engineering Co., Ltd., 985
Hose Handling Equipments, Mobil Oil Co., Ltd., 379
Hostels at Technical Colleges, 420
Hot Fume Extraction Fan, Keith Blackman Ltd., 107
Rolled Steel Strip, Continuous Gauging, Baldwin Instrument Co., Ltd., 573
Water, Central Heating by Low Pressure, (Code 93)
Water Heating Systems, Forced Circulation, (Report, 856)
Hours and Wages, (Leading Article, 933)
Hudson River, New York, "Thruway" or Tappan Zee Bridge, (Plate 15, 11.1.57)
Hull Pressure Measurements, Ship, N. Hogben, 645
Water Supply, 47
Human Relations for Management, Edward C. Bursk, (Review, 954)
Humanism, Technological, Sir Eric Ashby, 868
Hutte IV A. Elektrotechnik, (Review, 683)
Huyghens Tercentenary Exhibition, T. R. Robinson, 87
Hydraulic Buffers for Railway Stock, Dowty Hydraulic Units Ltd., 344
Calculations, Slide Rule, 135
Contour Tracing Attachment for Turret Lathes, Warner and Swasey Co., 351
Dynamometer for Mine Roof Control, Dowty Group Ltd., (930)
Engineering, International Course, 310
Haulage Drive for Coal-Cutting Machines, British Jeffrey-Diamond Ltd., 843
Lock at High Pressure, K. J. Whiteman, 554
Machinery, (Patents, 79, 509, 779, 855)
Pinion Press, Portable, 881
Press for Shaping Radioactive Materials, Loewy-Hydropress Division, 777
Ram, N. G. Calvert, 597
Separators for Grading Sands and Powders, Millars' Machinery Co., Ltd., 187
Shear for Rods and Cables, Portable, Copelaw Engineering Co., Ltd., 496
Transmission, Kieler Howaldtswerke A.G., 999
Transmissions, Hydromatic G.m.b.H., 812
Hydraulics, Aircraft, H. G. Conway, (Review, 871)
Research, 821
Hydrodynamic Lubrication of Piston Rings and Commutator Brushes, W. Lewicki, 84, 122
Hydrodynamics Laboratory, National Physical Laboratory New Ship, J. F. Allan, 557

HYDRO-ELECTRIC

American Water Power Schemes in 1956, 35, 76
Canadian Water Power, 161
Capital Investment in Power, 420
Garrison Dam and Reservoir, 76
Highland Water Power, North of Scotland Hydro-Electric Board, 46
Hiwassee Dam, Tennessee Valley Authority, 76
Italian Hydro-Electric Resources, (Plate 13, 11.1.57)
Kuibyshev Hydro-Electric Power Station, 421
Rockslide at Schoellkopf Power Station, 77
Russian Water Power, 849 ; (Leading Article, 820)
Scottish Water Power Developments, 367

Hydrogen Engine, (Report, 496)
Production, Liquid, Laboratories D'Electrostatique de Physique du Metal, 924
Hydrokinetic Fluid Drives, J. G. Giles, 104
Hydromechanics, Research, 879
Hydrophobic Cement, Cement Marketing Co., Ltd., 204
Hydroplane "Bluebird", L. H. Norris and K. W. Norris, 474 (and Suppt.) ; (Plate 12, 11.1.57)
Hydro-Pneumatic Engine, 1857, 280
Engine, E. F. Clark, (Letter, 648)
Hydrostatic Coupling, Zahnraderfabrik Renk A.G., 812
Gearbox, S.p.A. Cambi Idraulici Badalini, 113

I

Illustration, Pictorial, and Freehand Drawing for Draughtsmen, W. H. Kerry, (Review, 569)
Immingham and Barrow Docks, Improvements, (664)
Impact of Nuclear Energy on the Twentieth Century, T. E. Allibone, 984
Tests on Leaded Steels, 647
Impedance Tester, Phase-earth Loop, Ferranti Ltd., 572
Imperial College, Aeronautics at, 838 ; Analogue Computer, Sunvic Controls Ltd., 376 ; Expansion, 168
Impregnated Paper Capacitors, (Report, 1006)
Impregnating Varnishes, Organic Baking, for Electrical Purposes, (B.S.I., 369)
Impregnator, Large Vacuum, for the Pakistan Railways, 701
Improved Methods of Particle Size Analysis, T. H. Hughes, 860
Improvement on A.5 Trunk Road in Staffordshire, (25)
of River Trent Navigation, (508)
Scheme, Park Lane, 631
Inauguration of Work on Bradwell Nuclear Power Station, 121
Incidence Indication for Aircraft, 457
Inclinable and Rotary Optical Indexing Table, Optical Measuring Tools Ltd., (209)
Inclinometers for Use in Long Underground Boreholes, 655
Index to "The Engineer", 433
Indexing Table, Rotary and Inclinable Optical, Optical Measuring Tools Ltd., (209)
India, Industrial Development in, 917
Indicating Controller, Teddington Industrial Equipment, Ltd., 107
Indication, Incidence, for Aircraft, 457
Remote, "Multiplexing" System, General Electric Co., Ltd., 179
Indicator, Contact, Direction des Etudes et Fabrications D'Armement, 924
Smoke, and Alarm Unit, Lancashire Dynamo Electronic Products Ltd., 726
Indicators, Dial Test, (B.S.I., 444)
Indirect-Fired Gas Turbines, Donald L. Mordell, 210
Induction Furnace, Five-Ton Mains-Frequency Coreless Birlec Ltd., 490
Hardening Attachment on an Automatic, B.S.A. Tools Ltd., 619
Pumps, Linear, for Liquid Metals, A. S. Fenemore, 752
Regulator, Air-cooled, Laurence Scott and Electromotors Ltd., 572
Industrial Accidents, 916
Application of Computers, C. M. Berners-Lee, (Letter, 446); G. H. Room, (Letter, 368); Machine Loading, Ferranti Ltd., C. M. Berners-Lee, 169
Buildings, Thermal Insulation, 433
Design, 897
Development in India, 917
Disputes, 229, 308, 695
and Factory Law, (196)
Films Festival, 319
Fire Control, Cape Building Products Ltd., 879
Floor Coating, South American Minerals and Products Co., Ltd., (156)
Gas Turbine, Standard Motor Co., Ltd., 406
Gases, Monopolies Commission Report, 72
Glass Pipelines, James A. Jobling and Co., Ltd., 415
Investment, 733
Lighting Film, (892)
Process Control, Elliott Brothers (London) Ltd., 725
Production, 270, 542
Psychology, 462
Radiography, 5MeV Linear Accelerator, Mullard Ltd., 654
Re-rating, 241
Welfare Society, Industrial and Factory Law, (196)
Industries Exhibition, Country, (702)
Fair, British, 684 ; (Leading Article, 744)
Industry, Apprenticeship in the Plastics, 553
Australian Copper, 658
Australian Steel, Development and Growth, 500
Australian Wire Weaving, 382
Communications in, 420
Conference on Education, (778)
Congress of the Precast Concrete, 812
Consulting Engineers in, (38)
Dr. Glasgow's Contributions to the Gas, 370
Electrical Power for, (Leading Article, 972)
Electricity Supply, Proposals for Reorganisation, 9
Encyclopaedia of the Iron and Steel, A. K. Osborne, (Review, 837)
Essential Factors in the Future Development of the Oil, G. Sell, (Review, 529)
in Europe, Timber, (Report, 932)
and European Free Trade, 308
Future of the Aircraft, 821
Gas at Work in, 107
Germanium Rectifiers in, 57
Monopoly in the Electrical, (Leading Article, 355)
and Petrol Rationing, 43
and Press Relations, Peter Hale, (Review, 447)
Problems for the Steel, Dorman Long and Co., Ltd., 32
Re-Rating, (Leading Article, 280)
Russian Coal, 445
Scope for Operational Research, Stafford Beer, 434, 479
Scottish, 229
Specification and Management of Materials, C. H. Starr, (Review, 608)
and Taxation, 959
and Technical Progress, 867; (Leading Article, 819)
Textile, Fluid Bed Technique, 651
Titanium in the Aircraft, Imperial Chemical Industries Ltd., 295
Women in, 996
Year Book of the Heating and Ventilating, (Review, 139)
Industry's Expansion, Steel, 657
Prospects, Agricultural Machinery, 150
Inflation of Tubeless Tyres, Repetitive, Weldall and Assembly Ltd., 539
Infra-Red Dryer, 622
Projector, High-Intensity, Metropolitan-Vickers Electrical Co., Ltd., 461
Initial Quality, Low, Supersaturation in Steam Expanding from, Denis J. Ryley, 708
Injector, High-Frequency, for Arc Welding, Metropolitan-Vickers Electrical Co., Ltd., 146
Injuries from Road Accidents, Research, 43
Inner Ring Road, Birmingham, 395
Inside the Fence, (Factories Act), 832
Inspection, Automatic Ultrasonic, Kelvin and Hughes, Ltd., 455
Inspectorate, Chemical, 241
Installation at Cowlairs, Colour-Light Signalling, 454
Transmission Gear Heat-Treatment, David Brown Industries Ltd., 652
Institute of Export, Annual General Meeting, 810
of Fuel, Fuel Efficiency, J. R. Rylands, 687
of Industrial Administration, Industrial Design, 897 ; Working Plan, 72
of Marine Engineers, Annual Dinner, 395 ; Education and Training of Naval Architects and Marine Engineers, 253 ; Experience of an Ore Carrier Built Abroad, R. Atkinson, (664) ; Harland and Wolff Engine, (508) ; Marine Electrical Installations, A. N. Savage, (619)
of Materials Handling, Handbook, (968)
of Metals, Powder Metallurgy, 897 ; Spring Meeting, (137) ; Technological Humanism, Sir Eric Ashby, 868
of the Motor Industry, Presidential Address, 229
Nuclear Engineers', T. Johnson, (Letter, 907)
of Refrigeration, Anniversary Dinner, 201
of Road Transport Engineers, Wear and Tear, James Johnson, 605
of Seaweed Research, Annual Report, 897
of Sheet Metal Engineering, Change of Name, (778)
of Transport, Economics of Speed, Lord Douglas of Kirtleside, 291
Institution of British Agricultural Engineers, Agricultural Engineering Scholarships, (314); Annual Report, 757; Jungle Clearance and Reclamation, C. S. L. Frances, 267; Safety Devices for Agricultural Machinery, F. Lee, 405 ; Tractor Testing Techniques, T.C.D. Manby, 593
of Chemical Engineers, Royal Charter, (702)
of Civil Engineers, Annual Dinner, 707 ; Civil Engineering as a Career, (314) ; Civil Engineering Models, 992 ; Election of President, 161 ; Engineering Education in the Soviet Union, 340 ; International Conference on Soil Mechanics, 110 ; Large Telescopes, R.v.d. R. Woolley, 828 ; Silting in the Thames Estuary, 859 ; Urban Highway Maintenance, W. J. Hiscock, 43
of Electrical Engineers, Annual Dinner, 357 ; British Columbia-Vancouver Island 138kV Submarine Power Cable, T. Ingledow, R. M. Fairfield, E. L. Davey, K. S. Brazier and J. N. Gibson, 678 ; Electrical Engineering Training, 161 ; Engineering Education in the Soviet Union, 340 ; Honorary Membership and Faraday Medal, 83 ; Mechanical Strength of Power Transformers in Service, E. T. Norris, 331 ; Transatlantic Telephone Cable, 159 ; Symposium, 135, 176
of Engineering Designers, Educating Engineering Designers, 829
of Engineers-in-Charge, Annual Dinner, (749)
of Engineers and Shipbuilders in Scotland, Centenary, (816) ; Civil Engineering Contributions to Shipbuilding, 513 ; Paddle Wheels, H. Volpich and I. C. Bridge, (428) ; Plain Bearing Failures, P. P. Lover, (694) ; Ship Repairing, D. H. Sword, (508)
of Gas Engineers, Dr. Glasgow's Contributions to the Gas Industry, 370
of Highway Engineers, Low-Grade Materials for Road Construction, F. W. Ingle, 615
of Locomotive Engineers, Gold Medal, 473
of Mechanical Engineers, Awards, 121 ; Engineering Education in the Soviet Union, 340 ; Engineering Problems in the Application of Nuclear Energy, Sir Claude D. Gibb, 282, 320 ; Hydrokinetic Fluid Drives, J. G. Giles, 104 ; James Watt Medal, 232 ; Leonardo da Vinci Lecture for Boys, ; (Leading Article, 552) ; Mechanical Engineers and Clean Air, Sir Ewart Smith, 328 ; Practical Training of Mechanical Engineers, 394 ; Praise and Dispraise, (Leading Article, 394) ; (Letter, 484) ; Problems of the Small Utility Car, D. Giacosa, 616 ; Projection Planetarium and Shell Construction, Walther Bauersfeld, 755, 796; Prospects of the Motor Cycle, 497 ; Summer Meeting, 399
of Metallurgists, Annual General Meeting, 821
of Naval Architects, Annual Spring Meeting, (299), 473, 557, 602, 644 ; Ocean Iron Ore Carriers—Design Considerations, James Lenaghan, 524 ; Conditions for Unstable Rupturing of a Wide Plate, G. M. Boyd, 644 ; Education and Training of Naval Architects and Marine Engineers, 253 ; Effect of Cavitation in the Performance of a Series of 16in. Model Propellers, R. W. L. Gawn and L. C. Burrill, 558 ; Effect of Superstructures on the Longitudinal Strength of Ships, J. B. Cladwell, 604 ; Experience of an Ore Carrier Built Abroad, R. Atkinson, (664) ; Further Sea Trails on the "Lubumbashi", G. Aertssen, 602 ; Interaction between a Ship's Hull and a Long Superstructure, J. C. Chapman, 604 ; Model Experiments on a Series of 0.70 Block Coefficient Forms, R. E. Blackwell, G. L. Goodrich and D. J. Doust, 602 ; National Physical Laboratory New Ship Hydrodynamics Laboratory, J. F. Allan, 557 ; Scholarships, (276) ; Ship Hull Pressure Measurements, N. Hogben, 645 ; Stresses in Deckhouses and Superstructures, A. J. Johnson, 604
of Production Engineers, Problems of Aircraft Production, R. Maudling, 71 ; Specialist Group, 973 ; Standards Officers' Conference, 783
of Professional Civil Servants, Annual Conference, 810
of Structural Engineers, Gold Medal Award, (968) ; Structural Aluminium Research Scholarship, (196) ; Structural Engineering Conference, (588)
of Water Engineers, Summer Meeting, 783
Institutions of Engineers, 1857, 705
Instrument, Analogue, Laurence Scott and Electromotors Ltd., 766
Angle Testing, Carl Zeiss, 811
for Deaf-Mute Children, Musical, Philips Research Laboratories, 622
for Perspective Drawing, Franz Kuhlmann, 273
for the Precise Measurement of Length, Surveying, 538
Surface Finish Measuring, Hommelwerke G.m.b.H., 348
Instruments and Automation Congress, 773
Electronics and Automation, 724, 765
Fifty-Fourth Exhibition of French Scientific, 924
Measuring, (Patent, 197)
Insulated Cables, Aluminium Conductors in, (B.S.I., 67)
Cables, Manufacture of Mineral, British Insulated Callender's Cables Ltd., 806
Insulating Terms, Heat, and Methods of Determining Thermal Conductivity, (B.S.I., 269)
Insulation, Class-E, Drip-proof Squirrel-Cage Motors, Newman Industries Ltd., 343
Class-E, Ventilated Squirrel-Cage Motors with, English Electric Co., Ltd., 306
of Factories, Thermal, George T. Noble, (Letter, 568)
Factory, Thermal, Dick's Asbestos and Insulating Co., Ltd., 223
of Industrial Buildings, Thermal, 433
Thermal, by Compulsion, (Leading Article, 472)
Insulators, High-Voltage, Surface Leakage Problems, 387
Integral Construction for Road Vehicles, (Plate 3, 4.1.57)
Integration of European Trade, 462
Interaction between a Ship's Hull and a Long Superstructure, J. C. Chapman, 604
Interceptor Aircraft, Target Defence, Sud-Est "Durandal", 16
Interchange, European University, 959
Interferometer, High-Precision, for Gauge Block Comparison, 814

INTERNAL COMBUSTION ENGINES

Air-Cooled Oil Engine, Ruston and Hornsby Ltd., 499
Applications of Oil Engines, Rolls-Royce Ltd., 769
"Argosy" 200-h.p. Engine, Ajax Marine Engines Ltd., 102
Demise of a British "V-8" Engine, (Leading Article, 782)
Diesel Engine, "Commodore", Morris Motors Ltd., 102
Engine, Kelvin "P2", Bergins Co., Ltd., 102
Engine, 9-b.h.p., Stuart Turner Ltd., 102
Engine "PD4M" Air-cooled, Petters Ltd., 102
Engine, P3(M), F. Perkins Ltd., 102
Engine Test Beds, C.A.V. Ltd., (Plate 6, 1.1.57)
Engine, 2YBM, Ruston and Hornsby Ltd., 102
Direct Drive Engine, Villiers Engineering Co., Ltd., (97)
Discharge from an Engine Cylinder to Atmosphere, R. S. Benson, 946, 976
Engine Endurance, B.S.A. Motor Cycles Ltd., (778)
Starting Aid, Power Frequency Heating Ltd., 847
Engines at the National Boat Show, 102
High Output Diesel Engine, Vauxhall Motors Ltd., 265
Higher Speed Diesel Engines, Rover Co., Ltd., 911
Internal Combustion Research Centre at Lincoln, Ruston and Hornsby Ltd., 761
International Congress on Combustion Engines, (223), 973
Maintenance of High-speed Diesel Engines, Arthur W. Judge, (Review, 528)
Oil Engine Manual, D. S. D. Williams, (Review, 446)
Patents, 39, 79, 117, 237, 277, 315, 353, 391, 469, 549, 627, 741, 779, 817, 855, 931
Petrol Engine, "Vedette", Morris Motors Ltd., 102
Rationalised Engine Range, Ford Motor Co., Ltd., 802
Rover 2-Litre Diesel Engine, (953)
Turbo-Charger, Eberspacher, (Plate 5, 4.1.57)

Internal Coolant Feed for Grinding Wheels, 423
Defects in Castings, Terminology, (B.S.I., 649)
Grinding Machine Automatic, Keighley Grinders (M.T.) Ltd., 459
International Atomic Exposition at Philadelphia, 889, 927, 965, 1000
Building Exhibition, Berlin, 1957, 310
Committee for Process Control, 113
Conference on Prestressed Concrete, (142)

Conference on Soil Mechanics, 110
Congress on Combustion Engines, (223), 973
Congress on Irrigation, 37
Congress on Prestressed Concrete, (156)
Congress for the Promotion of Work and Workers, 923
Course in Hydraulic Engineering, 310
Cybernetics Association, Congress, 584
Geophysical Year, (778), 973
Liege Fair, Ninth, 232, 850
Mechanical Engineering Congress, 622
Pressure Die Casting Conference, 698
Trades Fair, Lille, 272
Interrupted Loading, Effect, on Mechanical Properties of Metals, E. W. Evans, 292, 325, 419
Inventions, Exhibitions of, 1857, 473
Hooke's, R. J. Law, (Letter, 138)
Investigation, Scientific, of the Upper Atmosphere, 342
of a Vortex Air Cleaner, T. C. Daniels, 358
Investigations, Thames Estuary, (Leading Article, 895)
Investment Casting, Soluble Wax Cores for, Firth Vickers Stainless Steels Ltd., 578
Industrial, 733
in Power, Capital, 420
Ipswich, Cliff Quay, 801
Ireland, Diesel Railcars for Northern, 882
Northern, Census of Production, (156)

IRON AND STEEL

Advances in Steel Technology in 1955, (Report, 601)
Austenitic Chromium-Manganese Steel Containing Nitrogen, 337
Born of Fire—Steel, (Review, 649)
British Steel, (Leading Article, 667)
Building Frame and the Steel Shortage, A. L. L. Baker, 286
Chromium-Aluminium Steels, 835
Chromium-Manganese-Nickel Heat-Resisting Steels, 646
Cleveland Iron and Steel Works, Dorman, Long and Co., Ltd., (Plate 5, 11.1.57)
Coal, Iron and Steel in 1956, 62
Continuous Gauging of Hot-Rolled Steel Strip, Baldwin Instrument Co., Ltd., 573
Damping Characteristics and Elastic Modulus of Iron—Chromium Alloys, 136
Design of Grey Iron Castings, (Report, 339)
Development and Growth of the Australian Steel Industry, 500
Dynamic Yield Strength of Steels, 482
Ebbw Vale Steel Works, Richard Thomas and Baldwins Ltd., (Plate 5, 11.1.57)
Effect of Sulphur in Deoxidised Steel, 834
Embrittlement of Nickel-Chromium Steel, 482
Encyclopaedia of the Iron and Steel Industry, A. K. Osborne, (Review, 837)
European Coal and Steel Community, 698, 897 ; Production in 1956, 348
High-Temperature Corrosion of Heat-Resisting Steels, 835
Impact Tests on Leaded Steels, 647
Iron Castings Production, 883
Castings with Spheroidal or Nodular Graphite, (B.S.I., 369)
and Steel for Colliery Cage Suspension Gear, (B.S.I., 609)
and Steel Exports, (196)
and Steel Production, 308, 462, 620, 770, 959
and Steel Works at Workington, Workington Iron and Steel Co., 804
Low-Alloy Steels, 336
Manufacture of Iron and Steel, G. R. Bashforth, (Review, 907)
Mechanical Properties of Steels at Elevated Temperatures, (B.S.I., 837)
Modified 12 Per Cent. Chromium Steels, 137
N.E. Coast Steelworks Development, South Durham Iron and Steel Co., Ltd., 542
Nitrides in Aluminium Steels, 136
Nodular Iron Process, New, 647
Notes on Prehistoric and Early Iron in the Old World, H. H. Coghlan, (Review, 101)
Ocean Iron Ore Carriers—Design Considerations, James Lenaghan, 524
Oil-Hardened and Tempered Steel Wire, (B.S.I., 110)
Problems for the Steel Industry, Dorman Long and Co., Ltd., 32
Production of Steel, Film, United Steel Companies Ltd., (664)
Prot Fatigue Tests on High-Strength Steel, 989
Recent Light Engineering Structures, 261
Recherches sur le Flambement de Colonnes en Acier A37, (Report, 416)
Rourkela Steel Works, 347
Rust Protection of Steel Chimneys, Southern Metalife Ltd., (468)
Solid Rolled Steel Railway Wheels, (B.S.I., 67)
Stainless Steel Soldering, Perdeck Soldering Products Ltd., (892)
Steel Boilers and Sterilising Plant, (B.S.I., 723)
Castings Research Laboratory, 910
Conveyors, Wharton (Engineers) Ltd., 227
Cutting Carbide Tools, (196)
Demand, 189
Export Policy, 72
Frame of Fourteen-storey Building, Wiesbaden, Fried. Krupp Maschinen und Stahlbau Rheinhausen, (Plate 14, 11.1.57)
Industry's Expansion, 657
Prices, 308
Production in the Saar, 192
Roll Doors, Golmet Ltd., (188)
for Shipbuilding, 462
Tubes and Bars, Talbot Steel Tube Co., Ltd., (993)
Works Coking Plant in Middlesbrough, Dorman Long (Steel) Ltd., 727
Steels, Slabs, Plates, Sections, Bars and Rivets, (Railway Rolling Stock), (B.S.I., 444)
Structural Steels for Warship Building with Some Notes on Brittle Fracture, Sir Victor Shepheard, 526
Temper Brittleness of Boron-Treated Steels, 835
World Iron Ore Reserves, 270
Iron and Steel Institute, Annual General Meeting, 833 ; Powder Metallurgy, 897
Irrigation, International Congress, 37
Italian Hydro-Electric Resources, (Plate 13, 11.1.57)
Italy, Lupara and Caifa Road Bridges, 582

J

"Jaguar" Fire, L. R. Chambers, (Letter, 485) ; Robertson Thain Ltd., (Letter, 408)
Jahrbuch der Elektrowarme, (Report, 529)
Japanese Destroyer Escort "Akebono", 92
Destoyer "Harukaze", 92
Jet Airliner Variant, De Havilland "Comet", (816)
Engine Parts, "Hydrospin" Machine for Forming, Cincinnati Milling Machine Co. 275
Fighter, "Mystere", 884
Fighters, Supersonic, SAAB-35, (Plate 13, 4.1.57)
"Griffon 02", First Flight of Ram, SNCAN, 999
Propulsion, de Havilland, (390)
Trainer, Fouga, 884
Transport Aircraft, "SE210 Caravelle", 922
Jets, Rotor Tip Pressure, Fairey Aviation Co., Ltd., 686
Joint for Polythene Tubes, Mange Plastics Ltd., 653
Jointing, Compressed Asbestos Fibre, (B.S.I., 334)
Joints, Strength Calculations of Bolted, M. Boomsma, 674
Jungle Clearance and Reclamation, C. S. L. Frances, 267
Junior Institution of Engineers, Annual Dinner, 669

K

Kariba and Zambesi, 383
Kempe's Engineers Year Book, 1957, (Review, 101)
Kensington Museum, 1857, 859
Kinetic Heating in Aircraft and Guided Missile Structures, Metropolitan-Vickers Electrical Co., Ltd., 957
Knitted Materials, Knitted Mesh Manufacturing Co., (854)
Kuibyshev Hydro-Electric Power Station, 421 463

L

Laboratories, New, British Steel Castings Research Association, 859
Laboratory, Argonne, National, Experimental Boiling Water Reactor, 623, 661, 699
Fatigue, Short Brothers and Harland Ltd., (276)
for Flight Physiology, 812
Heat Transfer, Babcock and Wilcox Ltd., (Plate 3, 11.1.57)
Heat Transfer, G.E.C.-Simon-Carves Atomic Energy Group, (Plate 3, 11.1.57)
High-voltage, Pilkington Brothers Ltd., 56
for Lubricants, Gamma Radiation, 877
New Ship Hydrodynamics, National Physical Laboratory, J. F. Allan, 557
Safety in Mines Research Establishment, 731
Sedimentology, Shell Petroleum Co., Ltd., (236)
Steel Castings Research, 910
Washington University Research Computer, (351)

LABOUR MATTERS

Apprentice Training Scheme, F. Perkins Ltd., (148)
Apprenticeship in the Plastics Industry, 553
Automobile Apprenticeship, Ford Motor Co., Ltd., 262
Average Earnings, 542
Briggs Disputes, 346
Changes in Wage Rates, 32, 229, 381
Civil Engineering as a Career, (314)
Coal Miners' Bonus, 308
Comment on Strikes, 695
Customer and the Strikes, (Leading Article, 630)
Dearth of Skilled Workmen, 1857, 201
Diligent Workmanship, (Leading Article, 240)
Directory of Opportunities for Graduates, (Review, 339)
Education and Training, 581
Employment and Defence Production, 657
and Unemployment, 111, 308, 420, 581, 770, 959
Engineering and Shipbuilding Wages, 399, 733, 770, 848
Wages, (Leading Articles, 705, 820)
Financial Information for Employees, 346
Forty-Hour Week, Confederation of Shipbuilding and Engineering Unions, 959
Hours and Wages, (Leading Article, 933)
Industrial Disputes, 229, 308, 695
International Congress for the Promotion of Work and Workers, 923
Labour Relations, 657
Machine and Hand Labour, 1857, 433
Man and His Tools, 404
Mobility of Labour in Western Europe, 191
On the Shipbuilding Strike, 441
Trade Disputes, 127
Our Colonial Labour Market, 1857, 318
Practical Training of Mechanical Engineers, 395
Railway Apprentice Training School, London Midland Region, (559)
Civil Engineer's Training Centre, (588)
Shopmen's Pay Claim, 733
Wages, 189, 500, 542, 581
Reduction of Hands at Woolwich, 1857, 241
Shipbuilding and Engineering Disputes, 462
and Engineering Wage Dispute, 500
and Engineering Wages, 542
Wages, 916
Skilled Workmen, 1857, 357
Sponsorship Schemes in Remploy Factories, Remploy Ltd., 303
Strike of Omnibus Servants, 1857, 745
Strikes, On and Pending, (Leading Article, 431)
Temporary Transfer of Workers, 770
Time Lost Through Disputes, 883
Trade Unions and Management, 581
Unemployment and Short Time Working, 189
Victorian Apprenticeship, H. E. Wimperis, 134
Wage Claims, 111
Negotiations and Productivity, (Leading Article, 511)
Wages and Salaries in Switzerland, 545
Women in Industry, 996
Work Sampling Techniques in Work Study, J. A. C. Williams, 245
Works Training for Graduates, (Leading Article, 199)

Lagos, Apapa Wharf, (664)
Laminar Free Convection ; A New Formula, E. J. Le Fevre, (Letter, 648)
Laminating Resin, High-Temperature, Bakelite Ltd., 689
Lamps, Fluorescent, Auxiliaries for Operation of, (B.S.I., 334)
Tubular Fluorescent, (B.S.I., 225)
Lanchester Memorial Lecture, Theodore von Karman, 745
Land Steam Boilers, Cylindrical, (B.S.I., 369)
Landslides in Clays, A. Collin, (Review, 987)
Lathe, Centre, Automatic Loading Device, Monarch Machine Tool Co., 275
Lathes, Turret, Hydraulic Contour Tracing Attachment, Warner and Swasey Co., 351
Launch, High-speed Passenger, John I. Thornycroft and Co., Ltd., 224
Launches and Trial Trips, 80, 118, 158, 198, 319, 430, 470, 549, 590, 628, 666, 704, 742, 780, 818, 856, 894, 970
Law, Industrial and Factory (196)
Lea Hall Colliery, Automatic Control for 1,200-h.p. Sinking Winders, 55
Lead Disposals, (196)
Leaded Steels, Impact Tests on, 647

LEADING ARTICLES

Air Deterrent, 668
Anti-Submarine Position To-day, 706
Atomic-Powered Tankers, 432
Ballistic Rocket Era and the Navy, 42
British Steel, 667
Budget, Much as Expected, 551
Cambridge Arts and Science Course, 972
Centenary of the Science Museum, 971
Clean Air, The Coming Conference, 200
Coal in the U.S.S.R., and in Britain, 858
Culture and the Science Museum, 471
Customer and the Strikes, 630
"Damtheism", 160
Defence or Deterrent ?, 356
White Paper, 1957, 552
Demise of a British "V-8" Engine, 782
Diesel Railway Traction, 472
Diligent Workmanship, 240
Disagreement Amongst the Eminent, 240
Dounreay, 781
Electrical Power for Industry, 972
Engineering Wages, 705, 820
Engineers and Metallurgists, 119
Estimates for the Fighting Services, 743
European Free Trade, 668 ; Area, 239
Fighter Policy, 279
George Jackson Churchward, 200
High M.E.P.—Low Revs, 512
Hours and Wages, 933
Industry and Technical Progress, 819
Liberalising Education, 857
Macmillan's Cabinet, 81
Monopoly in the Electrical Industry, 355
More Steam Locomotive Development, 591
Not a British Industries Fair, 744
"Nothing Recedes Like Success", 81
Praise and Dispraise of the "Mechanicals", 394
Re-Rating of Industry, 280
Research in Nuclear Science, 318
Retrospect, 1
Role of the Drawing Office, 629
Russian Education for Engineers, 317
Water Power, 820
Science in Schools, 744
or Service ? 41
Seeing by Radio, 592
Shipbuilding Challenge, 394
Slightly Oiled, 159
Strikes, On and Pending, 431
Studying Technological History, 896
Talking the American Way, 934
Thames Estuary Investigations, 895
Thermal Insulation by Compulsion, 472
Training of Naval Architects, 280
Transatlantic Telephone Cable, 159
Two Events of Youthful Importance, 552
Wage Negotiations and Productivity, 511
Wood Engravings, 82
Working to a Programme, 393
Works Training for Graduates, 199
World Oil Supplies, 120

Leak Detector, Compagnie Francaise Thomson-Houston, 925
Leakage Problems, Surface, on High-Voltage Insulators, 387
Leather Belting, Vegetable-Tanned, (B.S.I., 876)
Oil and Heat Resisting, George Angus and Co., Ltd., (968)
Leica Camera, Construction, H. G. Conway, 943
Leicestershire Work Study Group, (532)
Lending Library for Science and Technology, National, D. J. Urquhart, 90 ; Gordon H. Wright, (Letter, 174)
Length, Surveying Instrument for Precise Measurement of, 538
Let's Forget the Cycloid Tooth, F. E. Lindsay, (Letter, 648) ; W. A. Tuplin, (Letter, 722)

LETTERS TO THE EDITOR

Advanced Aeronautical Education, H. A. Mettam, 608
Air Speed Record, C. H. Chichester Smith, 174
Boundary Conditions in Lubricating Films, D.G. Christopherson, 100
Churchward, George Jackson, W. A. Tuplin, 254, 368 ; Kenneth H. Leech, 300
Committees, O. R. Tucker, 174
Computers, An Industrial Application, G. H. Room, 368
Culture—The Science Museum, I.E.C. Delegate, 722
"Damtheism", W. James, 215
Diesel Railway Traction, E. C. Poultney, 568
Fire Hazards of Roof Coverings, N. C. Strother Smith, 836
Floating Stations for Nuclear Power Plants, F. H. E. Myers, 214 ; A. P. Mason, 338
French Locomotive Experiences, J. T. Van Riemsdijk, 138
Hooke's Inventions, R. J. Law, 138
Hydro-Pneumatic Engine, E. F. Clark, 648
Industrial Application of Computers, C. M. Berners-Lee, 446
"Jaguar" Fire, Robertson Thain Ltd., 408 ; L. R. Chambers, 485
Laminar Free Convection : A New Formula, E. J. Le Fevre, 648
Lanchester, F. W., P. W. Kingsford, 100
Let's Forget the Cycloid Tooth, F. E. Lindsay, 648 ; W. A. Tuplin, 722
Locomotive Trials—Western Region, O. S. Nock ; E. C. Poultney, 798 ; W. A. Tuplin, 836
National Lending Library for Science and Technology, Gordon H. Wright, 174
Nuclear Engineers' Institute, T. Johnson, 907
Praise and Dispraise of the "Mechanicals", 484
Railway Electrification, 485
Reversing Gear, D. Guthrie, 608 ; P. Wilson, 799
Status of Engineers, 408 ; J. G. Orr, 446
Surge Generator, High-Voltage, A. Hill, 648
Terminology in Gearing, Allan H. Candee, 484 ; W. A. Tuplin, 569 ; A. M. Gunner, 758, 836 ; F. E. Lindsay, 836
Thermal Insulation of Factories, George T. Noble, 568
Traction Engine Railway Locomotives, Geoffrey W. King, 300 ; A. L. Lambert, 682 ; Stephen B. Fletcher, 758
Trials on the Western Region, W. A. Tuplin, 682
Welding at Calder Hall, Gordon Brown, 300
Western Region, 110 M.P.H., W. J. Alcock, 722

Level Gauges, Large Chamber, 769
Levelling Machine, Heavy Plate, Head Wrightson Machine Co., Ltd., 460
Liberalising Education, (Leading Article, 857)
Libraries, Technical College, 593
Library for Science and Technology, National Lending, D. J. Urquhart, 90 ; Gordon H. Wright, (Letter, 174)
Liege Fair, Ninth International, 232
University, Van de Graaff Accelerator, 152
Lift Truck, Fork Matling Ltd., 656
Truck, Mandrel, Maschinenfabrik Esslingen, 771
Lifting Appliances and Cranes, (Patent, 893)
Light Alloy Containers for Goods Transport, Tracons Ltd., (437)
Engineering Structures, Recent, 261
Lighthouse, Perotan Island, 226
Lighting Film, Industrial, (892)
Lightning Arrester, Asea Electric Ltd., 534
Lightship, "Flame", 96
Lightweight Construction, Congress, 348
Fighter Engine, Bristol "Orpheus B Or 3", (854)
Lille International Trades Fair, 272
Line Production of Die Castings, Wolverhampton Die Casting Co., Ltd., 453
Linear Accelerator, 5MeV, for Industrial Radiography, Mullard Ltd., 654
Induction Pumps for Liquid Metals, A. S. Fenemore, 752
Liner, Air Cargo, Sir W. G. Armstrong Whitworth Aircraft Ltd., 228
"Argyllshire", Cargo and Passenger, Greenock Dockyard Co., Ltd., (Plate 10, 4.1.57)
for Australian Service, 45,000-ton P. and O., Harland and Wolff Ltd., 185
"Bergensfjord", Norwegian America, Swan, Hunter and Wigham Richardson Ltd., 23
Cargo, "Capetan Cardamilitis", Burntisland Shipbuilding and Engineering Co., Ltd., 60
Cargo, "City of Colombo", Barclay, Curle and Co., Ltd., 60
Cargo, "Diomed", Caledon Shipbuilding and Engineering Co., Ltd., 60
Cargo, "Michael C", 94
Cargo-passenger, "Clan Ross", Greenock Dockyard Co., Ltd., 23
"Carinthia", Cunard, John Brown and Co. (Clydebank) Ltd., (Plate 9, 4.1.57)
"Empress of Britain", Canadian Pacific, Fairfield Shipbuilding and Engineering Co., Ltd., (Plate 9, 4.1.57)
"Norman Prince", Cargo Passenger, Burntisland Shipbuilding Co., Ltd., (Plate 10, 4.1.57)
"Nyanza", Cargo, Scotts' Shipbuilding and Engineering Co., Ltd., 23
"Reina del Mar", Harland and Wolff Ltd., (Plate 9, 4.1.57)
"Statendam", Holland America, Wilton-Fijenoord N.V., 886
Swedish American, "Gripsholm", Societe Ansaldo, 963
Link, Tropospheric Scatter, Marconi's Wireless Telegraph Co., Ltd., 59
Links, Steel, and Strap Assemblies, (B.S.I., 609)
Liquid Hydrogen Production, Laboratories D'Electrostatique de Physique de Metal, 924
Metals, Linear Induction Pumps for, A. S. Fenemore, 752
Petroleum Gas Plant in Austria, BP Benzin und Petroleum A.G., 544

LITERATURE

Books Received, 101, 175, 215, 256, 302, 339, 369, 409, 485, 529, 569, 609, 649, 683, 723, 759, 799, 837, 871, 907, 955, 987

Figures in Brackets ( ) refer to paragraphs

BOOKS OF REFERENCE

American Civil Engineering Practice, 409
B.B.C. Handbook, 1957, 215
British Shipbuilding Compendium, 1957, 683
Directory of Opportunities for Graduates, 339
of Shipowners, Shipbuilders and Marine Engineers, 1957, 799
Electrical Trades Directory, 1957, 799
Electricity Undertakings of the World, 101
F.B.I. Register of British Manufacturers, 1957, 215
Finishing Handbook and Directory, 1957, 799
Handbuch der Werften, 1956, 409
Hutte IV A. Elektrotechnik, 683
Kempe's Engineers Year Book, 1957, 101
Scientific Research in British Universities, 1955-56, 215
Ship and Boat Builder Annual Review, 1957, 683
Smoley's Four Combined Tables, 409
Soil Testing Manual, (547)
Streamlined Specification Standards, Vol. II, Electrical and Mechanical, 409
Surface Water Yearbook of Great Britain, 1953-54, 249 ; 1954-55, 870
"The Engineer" Buyers Guide, 256
Timber Preservation, 953
Water Engineer's Handbook 1957, 995
Year Book of the Heating and Ventilating Industry, 139

REVIEWS

A.C. Switchgear, J. R. Mortlock, 254
Aircraft Hydraulics, H. G. Conway, 871
Analog Computer Techniques, Clarence L. Johnson, 256
Analysis of Engineering Structures, A. J. S. Pippard and J. F. Baker, 682
Art and Science of Protective Relaying, C. Russell Mason, 569
Automation and Social Progress, S. Lilley, 739
in Theory and Practice, E. M. Hugh-Jones, 174
Bearing Design and Application, D. F. Wilcock and E. R. Booser, 836
Belt Conveyors, The Design, 215
Born of Fire—Steel, 649
Cams : Design, Dynamics and Accuracy, H. A. Rothbart, 215
Careers—Electrical Engineering, D. O. Bishop 955
Mechanical Engineering, R. W. Steed, 955
Complicated Watches and their Repair, Donald De Carle, 907
Defects and Failures of Metals, E. F. Polushkin, 301
Digital Calculating Machines, G. A. Montgomerie, 529
Drawing Office Handbook, R. W. Stuart Mitchell, 648
Dynamics of Machinery, James B. Hartman, 954
Elasticity, Fracture and Flow, with Engineering and Geological Applications, J. C. Jaeger, 139
Electrical Production of Music, Alan Douglas, 722
Electronic Analog Computers, G. A. and T. M. Korn, 256
Encyclopaedia of the Iron and Steel Industry, A. K. Osborne, 837
Engineering Analysis, Stephen H. Crandall, 338
Dynamics, C. B. Biezeno and R. Grammel, 175
Structural Failures, Rolt Hammond, 649
Uses of Rubber, A. T. McPherson and Alexander Klemin, 683
Essential Factors in the Future Development of the Oil Industry, G. Sell, 529
Excavation, Modern Techniques, H. L. Nichols, 955
Fatigue of Metals, 871
of Metals and Structures, H. J. Grover, S. A. Gordon and L. R. Jackson, 101
First One Hundred and Fifty Years, John Wiley and Sons Inc., 723
Fixed Capacitors : Radio and Electronic Components, G. W. A. Dummer, 138
Foundation Engineering, West's Piling and Construction Co., Ltd., (930)
Freehand Drawing and Pictorial Illustration for Draughtsmen, W. H. Kerry, 569
Friction and Lubrication, F. P. Bowden and D. Tabor, 300
General Theory of Electrical Machines, Bernard Adkins, 609
Handbook for Welding Design, 723
High-Speed Flight, E. Ower and J. Nayler, 101
Small Craft, Peter Du Cane, 409
Human Relations for Management, Edward C. Bursk, 954
Industry and Press Relations, Peter Hale, 447 and Technical Progress, (Leading Article), (Review, 819)
Interavia ABC Directory of World Aviation, 799
Landslides in Clays, A. Collin, 987
Lubrication of Bearings, F. T. Barwell, 338
Maintenance of High-Speed Diesel Engines, Arthur W. Judge, 528
Manufacture of Iron and Steel, G. R. Bashforth, 907
Mathematical Tables, L. Fox, 339
Tool-kit for Engineers, H. Webb and D. G. Ashwell, 723
Mathematics, A. T. Starr, 683
Mechanics, H. Weiler, 799
Mechanism of Phase Transformations in Metals, 955
Messung mechanischer Schwingungen, 649
Metallurgical Abstracts, General and Non-Ferrous, 953
Analysis by Means of the Spekker Photoelectric Absorptiometer, F. W. Hayward and A. A. R. Wood, 369
Modern Mathematics for the Engineer, Edwin F. Beckenbach, 302
Motor Vehicle Mechanics Text Book, F. K. Sully, 528
Nomograms for the Analysis of Frames, J. Rygol, 987
Notes on Prehistoric and Early Iron in the Old World, H. H. Goghlan, 101
Oil Engine Manual, D. S. D. Williams, 446
Fuel Applications, A. T. Henly, 871
Photography, Proceedings of the Third International Congress on High-Speed, 759
Platinum Metals Review, 137
Power Production : The Practical Application of World Energy, Hans Thirring, 139
System Communications, E. Openshaw Taylor, 683
Principles of Guided Missile Design, E. A. Bonney, M. J. Zucrow and C. W. Besserer, 368
of Physical Metallurgy, and Alloy Series in Physical Metallurgy, Morton C. Smith, 409
Properties of Combustion Gases, 139
Railway Station : An Architectural History, Carroll L. V. Meeks, 987
Relaxation Methods in Theoretical Physics, Sir Richard Southwell, 255
Rilem Symposium on Winter Concreting, 955
Rules and Regulations for the Construction and Classification of Steel Ships, 409
Sewage and Sewage Effluents, Methods of Chemical Analysis as Applied to, 255
Specification and Management of Materials in Industry, C. H. Starr, 608
Statistical Methods in Research and Production, O. L. Davies, 799
Steam Locomotive, O. S. Nock, 485
Stress Corrosion Cracking and Embrittlement, W. D. Robertson, 759
Technical Aspects of Sound, E. G. Richardson, 683
Theorie et Technique des Asservissements, J. C. Gille, M. Pelegrin and P. Decauline, 368
Theory of Suspension Bridges, Sir Alfred Pugsley, 447
of Vibrations for Engineers, E. B. Cole, 447
Transistors in Radio and Television, Milton S. Kiver, 408
Use and Welding of Aluminium in Shipbuilding, 485
Whitworth Register, H. H. Johnson and F. T. Barwell, 649
World Railways, 1956-57, 301
World's Tankers, Laurence Dunn, 529

Lithium-Magnesium Alloys, 989
Liverpool Overhead Railway, 897
Steam Ship Owners' Association, Annual Report, 433
Loading Device, Automatic, for Centre Lathe, Monarch Machine Tool Co., 275
Device, Automatic, for Gear Hobbing Machines, Churchill Gear Machines Ltd., 220
Effect of Interrupted, on Mechanical Properties of Metals, E. W. Evans, 292, 325, 419
Machine,—An Industrial Application of Computers, Ferranti Ltd., C. M. Berners-Lee, 169
Shovel, Mobile, F. E. Weatherill Ltd., 915
Loan Facilities for Small Manufacturers, 150
Lock at High Pressure, Hydraulic, K. J. Whiteman, 554
Swedish Cylinder, 272
for Tie Wires, Steel, Cuno Schuckhaus K.G., 385

LOCOMOTIVES

American 4-4-0 Locomotives, 366
Beyer-Garratt Locomotives for Rhodesia Railways, Beyer Peacock and Co., Ltd., 669
Churchward's Locomotives : The Origin of the Species ? E. C. Poultney, 944
Diesel Electric Locomotive for Malayan Railway, 1,500-h.p., Main Line, English Electric Co., Ltd., 574
Electric Locomotives for British Railways, 1,000-h.p., English Electric Co., Ltd., 913
Electric Locomotives, Main Line, for British Railways, English Electric Co., Ltd., 859
Electric Main Line Trains, Metropolitan-Cammel Carriage and Wagon Co., Ltd., 521
Electric Trains for the Southern Region, 732
Locomotives, Numbering of, (803)
Mechanical Shunting Locomotive, Ruston and Hornsby Ltd., 419
Shunting Locomotive for the Swedish State Railways, 272
Electric Locomotives, Consideration of Weight Transfer on B-B, E. H. Croft, 172
Locomotives, "E41", Henschel and Sohn, (Plate 13, 4.1.57)
Locomotives Ordered for British Railways, 513
Fairbairn Locomotives, Some, E. C. Poultney, 305
Forsyth's Improvements in Locomotive Engines, 1857, 972
French Locomotive Experiences, J. T. Van Riemsdijk, (Letter, 138)
Gear Drives for Locomotives, R. G. Jarvis, 783
Heavy Express Locomotive Trials on the Western Region, O. S. Nock, 560, 594
"King" 4-6-0 Express Passenger Locomotive, (Plate 7, 4.1.57)
Locomotive Trials—Western Region, O. S. Nock, (Letter, 798) ; E. C. Poultney, (Letter, 798) ; W. A. Tuplin, (Letter, 836)
"Merchant Navy" Locomotive No. 35018, (Plate 7, 4.1.57)
More Steam Locomotive Development, (Leading Article, 591)
Oil-Fired Locomotives, German, 584
Standard Class 5, Mixed Traffic Locomotive, (Plate 7, 4.1.57)
Steam Locomotive, O. S. Nock, (Review, 485)
Traction-Engine Railway Locomotives, R. A. S. Abbott, 165, 205 ; Geoffrey W. King, (Letter, 300) ; A. L. Lambert, (Letter, 682) ; Stephen B. Fletcher, (Letter, 758)
Trials on the Western Region, W. A. Tuplin, (Letter, 682)
London Travel Survey, 601
Longitudinal Strength of Ships, Effect of Superstructures on, J. B. Cladwell, 604
Longton By-pass Road, 840
Loop Impedance Tester, Phase-earth, Ferranti Ltd., 572
Looplayer and Minelayer H.M.C.S. "Blue Throat", 65
Loudhailer, Self-Contained Portable, Den Norske Hoyttaler-Fabrikk A/S, 850
Loudspeaker System at Paris Opera, German, 464
Low-Alloy Steels, 336
Low-Energy Reactor, Experimental, "NERO", 499
Lower Fraser River, Vancouver, Road Tunnel Under, 48
Low-Frequency Ultrasonic Cleaning and Degreasing Machine, Mullard Ltd., 724
Waveform Generator, Servomex Controls Ltd., 767
Low-Grade Materials for Road Construction, F. W. Ingle, 615
Low Initial Quality, Supersaturation in Steam Expanding From, Denis J. Ryley, 708
Low-pressure Hot Water, Central Heating, (Code, 93)
Low Revs—High M.E.P., (Leading Article, 512)
Low-Temperature Brittleness, 647
Oxidation Plant, W. C. Holmes and Co., Ltd., 769
Welding, Eutectic Welding Alloys Co., Ltd., 188
Lubricant, Mould, Amber Oils Ltd., (78)
Lubricants, Gamma Radiation Laboratory, 877
Lubricating Devices, (Patents, 353, 703, 779)
Films, Boundary Conditions in, D. G. Christopherson, (Letter, 100)
Lubrication, Automatic Crane and Crane Rail, Centralube Ltd., (809)
of Bearings, F. T. Barwell, (Review, 338)
and Friction, F. P. Bowden and D. Tabor, (Review, 300)
Hydrodynamic, of Piston Rings and Commutator Brushes, W. Lewicki, 84, 122
Positive Axle, Leyland, (732)
Lupara and Caifa Road Bridges, Italy, 582

M

Machine and Hand Labour, 1857, 433
Tool Trades Association, Annual Dinner, (548)

MACHINE TOOLS AND MACHINE SHOP EQUIPMENT

Automatic, Induction Hardening Attachment on an, B.S.A. Tools Ltd., 619
Automation, Machine Tool, Centre des Recherches Scientifiques Industrialles et Maritimes de Marseille, 924
Bending and Folding Machine, Scottish Machine Tool Corporation Ltd., 684
Carbide Tip Tools, Renewable, Wickman Ltd., 458
Tool for High Tensile Metals, Production Tool Alloy Co., Ltd., 539
Tools, Steel-Cutting, (196)
Tools, Steel-Cutting, Wickman Ltd., 109
Co-ordinate Setting, Newall Group Sales Ltd., (930)
Drill, Rotary, Atlas Copco (Great Britain) Ltd., 656
Two-Speed Portable Electric, Wolf Electric Tools Ltd., 694
Electrical Equipment for Machine Tools, (B.S.I., 723)
Gear Deburring Machine, Gebr. Boehringer G.m.b.H., 386
Hobbing Machines, Automatic Loading Device, Churchill Gear Machines Ltd., 220
Grinder, High-Speed Disc, Otto Suhner G.m.b.H., 964
Universal, F. lli Lizzini, 925
Grinding Machine, Automatic Internal, Keighley Grinders (M.T.) Ltd., 459
Wheel Dressers, Danite Hard Metals Ltd., (31)
Wheels, Internal Coolant Feed, 423
Hob Testing Machine, W. Ferd. Klingelnberg Sohne, 385
Hobbing Machine for Small Cyclo-Palloid Bevel Gears, W. Ferd. Klingelnberg Sohne, 545
"Hydrospin" Machine for Forming Jet Engine Parts, Cincinnati Milling Machine Co., 275
Indexing Table, Rotary and Inclinable Optical, Optical Measuring Tools Ltd., (209)
Lathe, Centre, Automatic Loading Device, Monarch Machine Tool Co., 275
Lathes, Turret, Hydraulic Contour Tracing Attachment, Warner and Swasey Co., 351
Machine Loading—An Industrial Application of Computers, Ferranti Ltd., C. M. Berners-Lee, 169
Manufacturer's Machine Tool Exhibition, B. Elliott and Co., Ltd., (508)
Milling Machine, Computer-Controlled, Ferranti Ltd., 58
Machine, Rotary, Dowding and Doll Ltd., 269
Patents, 237, 277, 469, 509, 549, 589, 1006
Planing Machine, Heavy-Duty, George Richards and Co., Ltd., 577
Machine, Heavy Duty, Noble and Lund Ltd., 994
Positioning Machine, Electronically-controlled Co-ordinate, Mullard Ltd., 724
Power Presses, Turner Brothers (Birmingham) Ltd., 684
Press for Aircraft Components, 15,000-ton, G. Siempelkamp and Co., Maschinenfabrik, 545
Brake, 60-ton, Bronx Engineering Co., Ltd., 684
Oil-Hydraulic Multi-Purpose, Becker and van Hullen, 885
Operation, Automatic Control Device, Press Guards Ltd., 188
Toggle, F. J. Edwards Ltd., (930)
Projector, Precision Workshop, Optical Measuring Tools Ltd., 377
Reamers for High-Tensile Steels, Short Brothers and Harland Ltd., 99
Screw Slotting Machine, Automation Ltd., 882
Tools and Workshop Appliances, (Patent, 969)
Tube Straightening Machine, Th. Kieserling and Albrecht, 660
Ultrasonic Generator for Drilling and Soldering Applications, Mullard Ltd., 228
Vice, Cam-Operated, Associated Steels and Tools Co., Ltd., 845
or Table, Universal Swivel, Trend Industrial Equipment Ltd., 985
Workshop Tools and Appliances, (Patents, 197, 665, 931, 1005)

Machinery a Century Ago, Farming, G. E. Fussell, 981
Dynamics of, James B. Hartman, (Review, 954)
Exports, Agricultural, 620
Exports, Britain's, 542
of the Paris Exhibition, 1857, 782
Production, German, 464
in the War Department, Application, 1857, 161
Machines, Component Handling, Fisher and Ludlow Ltd., (677)
General Theory of Electrical, Bernard Adkins, (Review, 609)
Macmillan's Cabinet, (Leading Article, 81)
Magnesium-Lithium Alloys, 989
Magnetic Alloy of High Permeability and Low Hysteresis Loss, 427
Dynamic Gramophone Pick-up, Philips Research Laboratories, 191
Separation, Electromagnets Ltd., (878)
Vee Block, William Urquhart, (968)
Main Line Diesel-Electric Locomotives for British Railways, English Electric Co., Ltd., 859
Line Diesel-Electric Locomotive for Malayan Railway, 1,500-h.p., English Electric Co., Ltd., 574
Line Diesel-Electric Trains, Metropolitan-Cammell Carriage and Wagon Co., Ltd., 521
Line Electrification, British, Track Circuiting Equipment, Westinghouse Brake and Signal Co., Ltd., 460
Mains-Frequency Coreless Induction Furnace, Five-ton, Birlec Ltd., 490
Maintenance of High-Speed Diesel Engines, Arthur W. Judge, 528
Urban Highway, W. J. Hiscock, 43
Malayan Railway, 1,500-h.p. Main Line Diesel-Electric Locomotive for, English Electric Co., Ltd., 574
Malmesbury Abbey Church, New Tower Clock, T. R. Robinson, 124
Man and His Tools, A, 404
Management, Human Relations for, Edward C. Bursk, (Review, 954)
and Specification of Materials for Industry, C. H. Starr, (Review, 608)
Top, 733
and Trade Unions, 581
Manchester City Engineer's Report, (314)
Mandrel Lift Truck, Maschinenfabrik Esslingen, 771
Manifold, Gas Sampling, at Calder Hall, Richard Klinger Ltd., 219
Manual, Oil Engine, D. S. D. Williams, (Review, 446)
Manufacture of Fractional Horsepower Motors, British Thomson-Houston Co., Ltd., 614
of Iron and Steel, G. R. Bashforth, (Review, 907)
of Mineral Insulated Cables, British Insulated Callender's Cables Ltd., 806
Motor Vehicle, (508)
of Plastics Patterns for Moulding, 617
Manufacturers' Advisory Service, 111
F.B.I. Register of British, 1957, (Review, 215)
Loan Facilities for, 150
Manufacturing Costs, 500
Establishments, Size of, 32
Manvers Main Colliery, A. C. Winders, General Electric Co., Ltd., 958
Marchwood Power Station, 908
Marcoule, French Atomic Factory, (Plate 14, 4.1.57)
Marine Electrical Installations, A. N. Savage, (619)
Engineering, (Patents, 469, 509, 627, 703)
Engineering and Shipbuilding in 1956, 23 ,60, 94
Engineers, Directory of Shipowners, Shipbuilders, 1957, (Review, 799)
Engineers and Naval Architects, Education and Training, 253
Equipment Exhibition, Carron Company, (382)
Propulsion, French Nuclear, 660
Maritime Structures, Two, 801
Marking, Metal, A. Levermore and Co., Ltd., (1004)
Masonry and Slag Cement, Africa, 383
Water-Repelling Treatment, Evode Ltd., (468)
Mass Spectrometer, Metropolitan-Vickers Electrical Co., Ltd., (Plate 7, 11.1.57)
Massiv Brucken, (Report, 529)
Mast, Tubular Drill, Salzgitter Maschinen A.G., 811
Master Mechanic, Arthur Woolf, T. R. Harris, 600
Masts, Towers and Pylons, Design of, (Report, 339)
Materials in Industry, Specification and Management, C. H. Starr, (Review, 608)
Knitted, Knitted Mesh Manufacturing Co., (854)
Low-Grade, for Road Construction, F. W. Ingle, 615
Prices, Basic, 111
Testing Mission to the U.S.A., 848
Mathematical Tables, L. Fox, (Review, 339)
Tool-kit for Engineers, H. A. Webb and D. G. Ashwell, (Review, 723)
Mathematics for Engineers, Modern, Edwin F. Beckenbach, (Review, 302)
A. T. Starr, (Review, 683)
Maudslay Society, Annual Luncheon, (892)

Measurement of Air Flow for Compressors and Exhausters, (B.S.I., 955)
of Length, Precise, Surveying Instrument, 538
Measurements, Flow Direction, in a Supersonic Wind Tunnel, (Report, 19)
Ship Hull Pressure, N. Hogben, 645
Measuring Apparatus, (Patent, 391)
Instrument, Surface Finish, Hommelwerke G.m.b.H., 348
Instruments, (Patent, 197)
Mechanic, Master,—Arthur Woolf, T. R. Harris, 600
Mechanical Efficiency, 540
Engineering, Careers, R. W. Steed, (Review, 955)
Engineering Congress, International, 622
Engineers and Clean Air, Sir Ewart Smith, 328
Engineers, Practical Training, 395
Properties of Metals, Effect of Interrupted Loading, E. W. Evans, 292, 325, 419
Properties of Steels at Elevated Temperatures, (B.S.I., 837)
Rubber Mouldings, Precision, Reliance Rubber Co., Ltd., (276)
Seals, Hard Metal-Faced, Crane Packing Ltd., (732)
Shaft Seal for Corrosive Services, Crane Packing Ltd., (86)
Strength of Power Transformers in Service, E. T. Norris, 331
Mechanics, H. Weiler, (Review, 799)
Soil, International Conference, 110
Text Book, Motor Vehicle, F. K. Sully, (Review, 528)
Mechanisation, Coal Face, 883
Colliery, 83
Mechanised Foundry and New Machine Shop, Beans Industries Ltd., 343
Coal Mines, Self-Advancing Roof Supports, Dowty, 995
Sorting Equipment for the Post Office, 688
Mechanism of Phase Transformations in Metals, (Review, 955)
Medal, Benjamin Franklin, Royal Society of Arts, 121
Faraday, and Honorary Membership, I.E.E., 83
Megaphone, Electronic, Pye Telecommunications Ltd., 228
Mellon Institute Expansion, 77
Melting Furnace, Electric Glass, British Heat Resisting Glass Co., Ltd., 57
M.E.P., High,—Low Revs, (Leading Article, 512)
"Merchant Navy" Locomotive No. 35018, (Plate 7, 4.1.57)
Ship, Reactor Contract for Nuclear-Powered, 891
Ships, Nuclear Propulsion, 4
Messung mechanischer Schwingungen, (Review, 649)
Metal Faced Mechanical Seals, Hard, Crane Packing Ltd., (732)
Fires, Extinguisher, Pyrene Co., Ltd., (221)
Marking, A. Levermore and Co., Ltd., (1004)
Shelving, Savage and Parsons Ltd., (1004)
Sorter, Portable, and Resistivity Test Set, Solartron Electronic Group Ltd., 188

METALLURGICAL TOPICS

Applications of Electrodeposits, 835
Austenitic Chromium-Manganese Steel Containing Nitrogen, 337
Cathodic Protection, Metal and Pipeline Endurance Ltd., (236)
Chemical Milling, 989
Chromium-Aluminium Steels, 835
Chromium-Manganese-Nickel Heat-Resisting Steels, 646
Cobalt-Tungsten Double Carbide in Hard Metals, 834
Control of Strain-Ageing, 483
Damping Characteristics and Elastic Modulus of Iron-Chromium Alloys, 136
Defects and Failures of Metals, E. P. Polushkin, (Review, 301)
Dynamic Yield Strength of Steels, 482
Effect of Environment on Creep-Rupture Properties, 647
of Interrupted Loading on Mechanical Properties of Metals, E. W. Evans, 292, 325, 419
of Sulphur in Deoxidised Steel, 834
Embrittlement of Nickel-Chromium Steel, 482
Engineers and Metallurgists, (Leading Article, 119)
Fatigue Laboratory, Short Brothers and Harland Ltd., (276)
of Metals, (Review, 871)
of Metals and Structures, H. J. Grover, S. A. Gordon and L. R. Jackson, (Review, 101)
Strength of Specimens Containing Preformed Fatigue Cracks, N. E. Frost, 864
High-Temperature Corrosion of Heat-Resisting Steels, 835
Oxidation of Carbide Alloys, 646
Impact Tests on Leaded Steels, 647
Low-Alloy Steels, 336
Low-Temperature Brittleness, 647
Magnesium-Lithium Alloys, 989
Magnetic Alloy of High Permeability and Low Hysteresis Loss, 427
Mechanical Properties of Steels at Elevated Temperatures, (B.S.I., 837)
Mechanism of Phase Transformation in Metals, (Review, 955)
Metal Statistics, 1946-1955, (Report, 256)
Metallurgical Abstracts, General and Non-Ferrous, (Review, 953)
Analysis by Means of the Spekker Photoelectric Absorptiometer, F. W. Hayward and A. A. R. Wood, (Review, 369)
Modified 12 per cent. Chromium Steels, 137
Molybdenum, 337
Nitrided Chromium, 137
Nitrides in Aluminium Steels, 136
Nodular Iron Process, New, 647
Patents, 237, 429, 665, 703, 970
Platinum Metals Review, 137
Portable Metal Sorter and Resistivity Test Set, Solartron Electronic Group Ltd., 188
Powder Metallurgy, 897
Metallurgy and Nuclear Research Today, H. W. Greenwood, 988
Principles of Physical Metallurgy, and Alloy Series in Physical Metallurgy, Morton C. Smith, (Review, 409)
Prot Fatigue Tests on High-Strength Steel, 989
Pusher Furnace for Powder Metallurgy, General Electric Co., Ltd., 915
Refining and Using Nickel, L. B. Pfeil, 720
Regenerative Furnace, Centenary, 337
Stress Corrosion Cracking and Embrittlement, W. D. Robertson, (Review, 759)
Structural Steels for Warship Building with Some Notes on Brittle Fracture, Sir Victor Shepheard, 526
Symposium on Corrosion of Metals in Buildings, (71)
Temper Brittleness of Boron-Treated Steels, 835
Tensile Properties of Copper-Nickel Alloys at High Temperatures, 988
Utilisation des Compteurs de Geiger-Muller a L'etude de Variations de Tecture de Laminage Suivant la Temperature de Deformation, (Report, 302)
X-Ray Studies of Stress in Metals, National Bureau of Standards, 154
Metals in Buildings, Symposium on Corrosion, (71)
Carbide Tool for High Tensile, Production Tool Alloy Co., Ltd., 539
Defects and Failures, E. P. Polushkin, (Review, 301)
Effect of Interrupted Loading on the Mechanical Properties of, E. W. Evans, 419
Fatigue, (Review, 871)
Liquid, Linear Induction Pumps for, A. S. Fenemore, 752
Mechanism of Phase Transformations, (Review, 955)
Non-Ferrous, Continuous Casting Machine for, Lobeck Casting Processes Inc., 350
Review, Platinum, 137
and Structures, Fatigue, H. J. Grover, S. A. Gordon and L. R. Jackson, (Review, 101)
Tensile Testing, (B.S.I., 580)
X-Ray Studies of Stresses, 154
Meter-Chronometer, Frequency, S. A. Rochar Electronique, 924
Meter, Transistor, Association des Ouvriers en Instruments de Precision, 924
Methods of Particle Size Analysis, Improved, T. H. Hughes, 860
in Research and Production, Statistical, O. L. Davies, (Review, 799)
of Testing Plastics, (B.S.I., 723)
Microscope for Gauging Tree Growth, Computer, 423
Research, McArthur Microscopes Ltd., 494
Microwave Course Beacon, 378
Frequencies, Solid-State Oscillator for, Bell Telephone Laboratories, 389
Middle East Pipeline, 810
Middlesbrough, Steel Works Coking Plant, Dorman Long (Steel) Ltd., 727
Military Aircraft Developments, 847
Transport Aircraft, Hurel-Dubois, 88
Mill at Aylesford, Cellulose Wadding, Kimberley-Clark Corporation, 875
Continuous, Phoenix-Rheinrohr, 504
Finnish Flour, 309
Opening of Wadding, Reed Paper Group, 669
Rolling, and Heavy Press Installations in America, (Plate 16, 11.1.57)
Skelp, at Newcastle, N.S.W., 537
Solid Wheel and Disc, Schloemann A.G., 347
Twenty-High Cluster, for Rolling Ultra-Thin Strip, Loma Machine Manufacturing Co., 351
Milling, Chemical, 989
Machine, Computer-Controlled, Ferranti Ltd., 58
Machine, Rotary, Dowding and Doll Ltd., 269
Minelayer and Looplayer H.M.C.S. "Blue Throat", 65
Mineral Insulated Cables, Manufacture, British Insulated Callender's Cables Ltd., 806
Minerals and Geology, Papers on Colonial, (264)

MINES AND MINING

A.C. Winders at Manvers Main Colliery, General Electric Co., Ltd., 958
Automatic Control for 1,200-h.p. Sinking Winders, 55
Coal Face Mechanisation, 883
Miners' Bonus, 308
Colliery Explosions, 1857, 592
Mechanisation, 83
Reorganisation Schemes, Two, 140, 180
D.C. Winder with Control, Exciter at Silverwood Colliery, General Electric Co., Ltd., 182
European Congress on Ground Movements, 417
Flameproof Transformer for Coal Mines, ACEC, 192
Friction Winder for Coal Mine, Gutehoffnungshutte Sterkrade A.G., 771
General Survey of the Ground Movement Problem, J. T. Whetton, 562
Ground Movements Due to Mining, 553
Hydraulic Dynamometer for Mine Roof Control, Dowty Group Ltd., (930)
Haulage Drive for Coal-Cutting Machines, British Jeffrey-Diamond Ltd., 843
Improved Continuous Mining Machine, Joy-Sullivan Ltd., 306
Iron and Steel for Colliery Cage Suspension Gear, (B.S.I., 609)
National Coal Board's Modernisation Programme, (Plate 4, 11.1.57)
Patents, 157, 469
Power Station at Williamson Diamond Mines, 373
Safety in Mines Research Laboratory, 731
Self-Advancing Roof Supports for Mechanised Coal Mines, Dowty, 995
Skip Winder, 3,000-h.p., at Cwm Colliery, 55
Tractor and Trailer Vehicles for Opencast Coal Hauling, Costain Mining Ltd., (Plate 9, 11.1.57)
Miniature Motor Car, Henry Meadows Ltd., 419
Missile Construction, Bulletin No. 173, (901)
Design, Principles of Guided, E. A. Bonney, M. J. Zucrow and C. W. Besserer, (Review, 368)
Development Programme, American, 813
Structures, Guided, Kinetic Heating in Aircraft and, Metropolitan-Vickers Electrical Co., Ltd., 957
Missiles, Defensive, de Havilland Propellers Ltd., 694
Mission to Canadian Oilfields, 770
to the U.S.A., Materials Testing, 848
Mixed Traffic Locomotive, Standard Class 5, (Plate 7, 4.1.57)
Mixing and Batch Counting Equipment, Sinex Engineering Co., Ltd., (854)
Mobile Air Compressor, Hymatic Engineering Co., Ltd., 71
Workshops for Servicing Power Station Equipment, British Thomson-Houston Co., Ltd., 580
Mobility of Labour in Western Europe, 191
Model Experimental Tank, Ship, 145
Experiments on a Series of 0.70 Block Coefficient Forms, R. E. Blackwell, G. L. Goodrich and D. J. Doust, 602
Propellers, 16in., Effect of Cavitation in the Performance of a Series, R. W. L. Gawn and L. C. Burrill, 558
Models, Civil Engineering, 992
Modern Mathematics for Engineers, Edwin F. Beckenbach, (Review, 302)
Techniques of Excavation, H. L. Nichols, (Review, 955)
Modernisation Plan, French Railways', 621
Plans on British Railways, Progress, 417
Programme, National Coal Board, (Plate 4, 11.1.57)
Works, Eastern Region, (458)
Modifications in a Precast Concrete Works, Modular Concrete Co., 496
Modified 12 Per Cent. Chromium Steels, 137
Modulus, Elastic, and Damping Characteristics of Iron-Chromium Alloys, 136
Moisture in Solids, Determination, (Report, 302)
Molybdenum, 337
Gold-Coated, for Turbine Blades, (587)
Monitor, Vibration, Laurence Scott and Electromotors Ltd., 766
Monopolies Commission Report on Industrial Gases, 72
and Restrictive Practices Commission's Report, Electrical and Allied Plant, 335
Monopoly in the Electrical Industry, (Leading Article, 355)
Monthly Figures of Export Trade, 229
More Steam Locomotive Development, (Leading Article, 591)
Moroccan Railways, High-speed Railcars, De Dietrich et Cie, 230
Motor Car, Miniature, Henry Meadows Ltd., 419
Compound-wound Three-phase A.C., Siemens-Schuckertwerke, 232
Control Centre, General Electric Co., Ltd., 535
Cycle, Prospects, 497
Cycle, Supercharged N.S.U., (Plate 12, 11.1.57)
"J.C." Totally Enclosed, Newman Industries Ltd., 570
Ship "Scottish Coast", G. W. Tripp, 403
Starters and Controllers, (B.S.I., 766)
Vehicle Manufacture, (508)
Vehicle Mechanic's Text Book, F. K. Sully, (Review, 528)
Vehicle Regulations, (968)
Vessel "Essex Ferry", G. W. Tripp, 171
Motorised Pedal Cycles, 848
Motors, Drip-proof Squirrel-Cage, with Class-E Insulation, Newman Industries Ltd., 343
Squirrel-cage, Crompton Parkinson Ltd., 571
Standard A.C., Improved Range, Crompton Parkinson Ltd., 109
Ventilated Squirrel-Cage, with Class-E Insulation, English Electric Co., Ltd., 306
Motorway, Route of Birmingham to Preston, 593
Mould Lubricant, Amber Oils Ltd., (78)
Moulding Machine, Shell, Fairbairn Lawson Combe Barbour Ltd., 107
Manufacture of Plastics Patterns for, 617
Mouldings, Precision Mechanical Rubber, Reliance Rubber Co., Ltd., (276)
Mountain Transport Facilities in Switzerland, 464
Mounting, Anti-Vibration, 494
Movement Problem, General Survey of the Ground, J. T. Whetton, 562
Movements Due to Mining, Ground, 553
European Congress on Ground, 417
Multi-Channel Radio-Telephone Link for Portugal, Automatic Telephone and Electric Co., Ltd., 149
Multiple-Unit Electric Trains on London Midland Region, 844
Mural Tape Standardising Base, Changes in a 50m, L. O. C. Johnson, 632
Museum, Centenary of the Science, (Leading Article, 971)
Kensington, 1857, 859
Science, and Culture, (Leading Article, 471); I.E.C. Delegate, (Letter, 722)
Science, Electric Power Gallery, 783
South Kensington, 1857, 934
Electrical Production, Alan Douglas, (Review, 722)
Musical Instrument for Deaf-Mute Children, Philips Research Laboratories, 622

N

Names, Trade, Computer Production, 503
Narvik, Ore-handling Facilities at Port, (Plate 14, 11.1.57)
National Automobile Show, America, 193
Boat Show, 4; Engines, 102
Bureau of Standards, Electronic Calibration Centre, 852
Coal Board's Report, 916
Institute of Agricultural Engineering, Tractor Testing Techniques, 593
Institute of Industrial Psychology, Industrial Psychology, 462
Institute for Research in Nuclear Science, 281
Laboratory, Argonne, Experimental Boiling Water Reactor, 623, 661, 699
Lending Library for Science and Technology, D. J. Urquhart, 90; Gordon H. Wright, (Letter, 174)
Physical Laboratory New Ship Hydrodynamics Laboratory, J. F. Allan, 557; Open Days, 839
Research Development Corporation, Report and Statement of Accounts, 481
Smoke Abatement Society, New Name, (702)
Society for Clean Air, New Name, (702)
Natural Gas in Yorkshire, Imperial Chemical Industries, Ltd., (185)
Naval Architects and Marine Engineers, Education and Training, 253
Architects, Training, (Leading Article, 280)
Construction in 1956, 29, 65, 92
Interceptor, de Havilland "Sea Vixen", (508)
Nuclear Propulsion, 281
Use, Closed-Cycle Air Turbine, W. Spillman, 995
Navigation Improvement, River Trent, (508)
Navy and the Ballistic Rocket Era, (Leading Article, 42)
Diesel-Electric Paddle Tugs, G. W. Tripp, 486
Royal, Teaching Device, 413
Neath By-Pass, Second Stage, 473
Negatives, Electronic Printer for Aerial Photographic, Cintel-Television Ltd., 914
Negotiations, Wage, and Productivity, (Leading Article, 511)
Netherlands Destroyer, "Friesland", 92
Prestressed Concrete, 231
Network Analyser, Fluid, Nash and Thompson Ltd., 765
New Year Honours, 15
York, "Thruway" or Tappan Zee Bridge Crossing the Hudson River, (Plate 15, 11.1.57)
Nickel Chromium Steel, Embrittlement, 482
Copper Alloys at High Temperatures, Tensile Properties, 988
Ores, Sudbury, International Nickel Co., of Canada Ltd., (380)
Refining and Using, L. B. Pfeil, 720
Nigeria, Road Development, (428)
Nitrided Chromium, 137
Nitrides in Aluminium Steels, 136
Nodular Graphite, Iron Castings with Spheroidal or, (B.S.I., 369)
Iron Process, New, 647
Noise Suppression, (Patent, 353)
Nomogram for Steam Condenser Design, J. P. Duncan, 642
Nomograms for the Analysis of Frames, J. Rygol, (Review, 987)
Non-Cohesive Spherical Particles in Pipes, Flow of Suspensions, H. E. Rose and H. E. Barnacle, 898, 939
Non-Ferrous Foundries, Safety, 996
Metals, Continuous Casting Machine for, Lobeck Casting Processes Inc., 350
North-East Coast Institution of Engineers and Shipbuilders, Annual Dinner, 121; Marine Machinery Breakdowns, J. H. Milton, (664); Refractory Nozzle Blades for High-Temperature Gas Turbines, 251; Ship Vibration, A. J. Johnson and P. W. Ayling, (664); Voyage Data, R. E. Clements, (173)
Northern Ireland Census of Production, (156)
Ireland, Diesel Railcars, 882
Outfall, Construction of Secondary Treatment Plant, 610
Norwegian America Liner "Bergensfjord", Swan Hunter and Wigham Richardson Ltd., 23
Notes on the Development of Fairground Machinery, Further, P. W. Bradley, 437
on Prehistoric and Early Iron in the Old World, H. H. Coghlan, (Review, 101)
"Nothing Recedes Like Success", (Leading Article, 81)
Nottingham, Progress of Clifton Bridge, 872
Nozzle Blades, Refractory, for High-Temperature Gas Turbines, 251

NUCLEAR ENERGY

American Research Reactor for Brazil, 507
Atomic Energy Developments in the United States, (Plate 15, 4.1.57)
Energy Exhibition for Australia, 513
Powered Tankers, (Leading Article, 432)
Berkeley Nuclear Power Station, 143, 650
Broadened Basic of British Nuclear Energy Conference, 83
Calder Hall Nuclear Power Station, (Plate 1, 4.1.57)
Capital Investment in Power, 420
Commercial Agreement for Pressurised-Water Power Plants, 161
Conference on Nuclear Energy, 113
Conventional Aspects of Nuclear Power, H. G. Rickover, 520
Discovery of New Nuclear Reaction at Berkeley, 274
Dounreay Atomic Energy Establishment, 747, 784, 823; (Leading Article, 781)
Effect of Nuclear Power on C.E.A. 275kV Transmission System, 721
Engineering, Marine, Welding and Nuclear Energy Exhibition, (156)
Problems in the Application of Nuclear Energy, Sir Claude D. Gibb, 282, 320
Euratom Report, 772
European Atomic Community, 659
Experimental Boiling Water Reactor at the Argonne National Laboratory, 623, 661, 699
Export of American Research Reactor to Japan, 75
Fast Reactor at Dounreay, (Plate 2, 11.1.57)
Floating Stations for Nuclear Power Plants, A. P. Mason, (Letter, 338); F. H. E. Myers, (Letter, 214)
French Atomic Factory at Marcoule, (Plate 14, 4.1.57)
Nuclear Marine Propulsion, 660
Future of Nuclear Power, Sir Christopher Hinton, 442

Gamma Radiation Laboratory for Lubricants, 877
Gas Cooling in Power-Producing Nuclear Reactors, R. J. Beale, 974
Sampling Manifold at Calder Hall, Richard Klinger Ltd., 219
Generation Costs of Nuclear Power, 937
German Nuclear Power, 773
Nuclear Power Plants, 423
Global Distribution of Radioactivity from Nuclear Detonations, 233
Great Britain's 6,000MW Nuclear Power Programme, 357
Heat Exchanger Banks for Dounreay Fast Reactor, John Thompson Ltd., (Plate 3, 11.1.57)
Transfer Laboratory, Babcock and Wilcox Ltd., (Plate 3, 11.1.57)
Transfer Laboratory, G.E.C.-Simon-Carves Atomic Energy Group, (Plate 3, 11.1.57)
Heavy Water Separation Process, 503
Helium Drier and Absorber for "Dido" Research Reactor, British Oxygen Engineering Ltd., 654
Hydraulic Press for Shaping Radioactive Materials, Loewy-Hydropress Division, 777
Impact of Nuclear Energy on the Twentieth Century, T. E. Allibone, 984
Inauguration of Work on Bradwell Nuclear Power Station, 121
International Atomic Exposition at Philadelphia, 889, 927, 965, 1,000
Merchant Ships, Nuclear Propulsion, 4
National Institute for Research in Nuclear Science, 281
Naval Nuclear Propulsion, 281
"NERO" Experimental Low-Energy Reactor, 499
Nuclear Engineers' Institute, T. Johnson, (Letter, 907)
Machinery for Submarine, Vickers Nuclear Engineering Ltd., (390)
Power in 1956, 5
Reactions and Power Development, Sir John Cockcroft, 418
Weapon Tests, Decca Naviagator Co., Ltd., (236)
Operating Experience at Calder Hall, 241
Particle Accelerator, 25,000MeV, at Brookhaven National Laboratory, 507
Accelerator, Van de Graaff, 58
Penetration and Diffusion of Gamma-Rays, 193
Powder Metallurgy and Nuclear Research Today, H. W. Greenwood, 988
Power Station for West Germany, 15 MW Nuclear, Mitchell Engineering Ltd., 575
Precipitator Unit for Detecting Burst Slugs, Plessey Nucleonics Ltd., 58
Progress at Berkeley Nuclear Power Station, 991
Reactor Contract for Nuclear-Power Merchant Ship, 891
Technology Training, 745
Remote Operation and Observation, Savage and Parsons Ltd., 377
Research in Nuclear Science, (Leading Article, 318)
Reactor for Venezuela, 75
Reactors at Harwell, (Plate 2, 11.1.57)
Scotland's First Nuclear Power Station, 216, 260
Sodium Graphite Reactor Electric Power Plants, 424
Reactor Experiment Begins Operation, U.S., 967
U.S. Atomic Energy Commission, Tenth Anniversary, 310
U.S.S. Atomic Powered Submarine "Sea Wolf", 65
Van de Graaff Accelerator for Liege University, 152
Generator, 58
Working to a Programme, (Leading Article, 393)

Numbering of Diesel Locomotives, (803)
Nut Welding Machine, Automatic Feeding Equipment, Rhoden Partners Ltd., 767

O

OBITUARY

Allan, J. F., 935
Clough, Frederic Horton, (390)
Craig, Sir John, 202
Culley, A. E., 241
Elliott, J. W., 473
Foxwell, Dr. G. E., 669
Fry, E. R., (854)
Haslett, Dame Caroline, 42
Herbert, Sir Alfred, 822
MacDonald, Sir Murdoch, 670
McGillivray, J. B., (930)
Mayo, Major R. H., 357
Rambush, N. E., 783
Smith, Ewen H., (352)
Smith, Sir William, 281
Stevenson, Bert, (352)
Thomson, Thomas, (778)
Walters, W. Ivan, (702)
Whale, Robert, (778)
Whitelegg, R. H., (468)

Observation and Operation, Remote, Savage and Parsons Ltd., 377
of Short Duration Arcs, Oscillographic, (Report, 1006)
Ocean Iron Ore Carriers,—Design Considerations, James Lenaghan, 524
O.E.E.C., Eighth Annual Report, (Report, 894)
Offensive Pilotless Weapon, Northrop SM-62 "Snark", 922
Office, Drawing, Datum Selection, L. P. Wakefield, 675
Handbook, Drawing, R. W. Stuart Mitchell, (Review, 648)
The Role of the Drawing, (Leading Article, 629)
Offices, New, for British Railways Central Electrical Staff, (376)
Ohio River Valley, Aluminium Production, 427
Oil Burner, Self-Proportioning, Premier Oil Burners, 380
and Chemical Filter, Plenty and Son, Ltd., 460
Circuit Breaker, General Electric Co., Ltd., 56
Circuit Breaker, 132kV, 5,000MVA Outdoor, General Electric Co., Ltd., 691
Engine, Air-Cooled, Ruston and Hornsby Ltd., 499
Engine Applications, Rolls-Royce Ltd., 769
Engine Manual, D. S. D. Williams, (Review, 446)
Fired Boilers, Automatic Control, for, James, Gordon and Co., Ltd., 655
Fired Locomotives, German, 584
Fuel Applications, A. T. Henly, (Review, 871)
Fuel, and Petrol, 462
Future Demand in Western Europe, 112
Hardened and Tempered Steel Wire, (B.S.I., 110)
and Heat Resisting Leather, George Angus and Co., Ltd., (968)
Hydraulic Multi-Purpose Press, Becker and van Hullen, 885
Industry, Essential Factors in the Future Development, G. Sell, (Review, 529)
Refinery, Canadian, British Petroleum Co., Ltd., (445)
Refinery for Turkey, (702)
Storage in Sweden, 348
Supplies, World, (Leading Article, 120)
Tanker "Caltex Edinburgh", Scott's Shipbuilding and Engineering Co., Ltd., (Plate 10, 11.1.57)
Tanker, "George F. Getty", 545
Tanker "San Felipe", Smith's Dock Co., Ltd., (Plate 10, 11.1.57)
Tanker "Solfonn", 95
Tanker "Spyros Niarchos" Vickers-Armstrongs (Shipbuilders) Ltd., (Plate 10, 11.1.57) ; Film, (221)
Tanker "Vivien Louise", 95
Tanker "Vola", 95
Oiled, Slightly, (Leading Article, 159)
Oilfields, Mission to Canadian, 770
Old World, Notes on Prehistoric and Early Iron, H. H. Coghlan, (Review, 101)
Omnibus Servants, Strike, 1857, 745
On Trade Disputes, 127

ONE HUNDRED YEARS AGO—1857

"A Rope's End", 120
Application of Machinery in the War Department, 161
Association of Foremen Engineers, 394
Colliery Explosions, 592
Consumption of Smoke upon Railways, 42
"Dearth of Skilled Workmen", 201
Exhibitions of Inventions, 473
Experiments at Woolwich, 553
Forsyth's Improvements in Locomotive Engines, 972
Great Bee-Hive, 668
How's Ship Pump and Fire Engine, 630
Hydro-Pneumatic Engine, 280
Institutions of Engineers, 706
Introduction of Gas for Railway Trains, 821
Kensington Museum, 859
Machine and Hand Labour, 433
Machinery of the Paris Exhibition, 782
Our Colonial Labour Market, 318
Pickings from the Past, 4
Reduction of Hands at Woolwich, 241
Skilled Workmen, 357
South Kensington Museum, 934
Steam Culture—Rope Traction, 513
Strike of Omnibus Servants, 745
Submarine Operations, 896
"What Are We To Do With Our Street Traffic"? 83

Open Pit Working Contracts for Nchanga, Africa, 383
Skies for Peace Exhibition, 43
University Scholarship, Lockheed Hydraulic Brake Co., Ltd., (236)
Opencast Coal Hauling, Tractor and Trailer Vehicles for, Costain Mining Ltd., (Plate 9, 11.1.57)
Openhearth Furnace, Combustion and Heat Transfer, (Report, 970)
Opening of Wadding Mill, Reed Paper Group, 669
Opera, Paris, German Loudspeaker System, 464
Operating Experience at Calder Hall, 241
Operation of Fluorescent Lamps, Auxiliaries for, (B.S.I., 334)
and Observation, Remote, Savage and Parsons, Ltd., 377
Operational Research in Industry, Scope for, Stafford Beer, 434, 479
Operations, Submarine, 1857, 896
Opportunities for Graduates, Directory, (Review, 339)
Optical Indexing Table, Rotary and Inclinable, Optical Measuring Tools Ltd., (209)
Ordnance Factories, Royal, 189, 745
Ore Carrier, "Ruth Lake", 96
Carriers, Ocean Iron,—Design Consideration, James Lenaghan, 524
Handling Facilities at Port of Narvik, (Plate 14, 11.1.57)
Reserves, World Iron, 270
Ores, Sudbury Nickel, International Nickel Co. of Canada Ltd., (380)
Organic Baking Impregnating Varnishes for Electrical Purposes, (B.S.I , 369)
Origin of the Species, Churchward's Locomotives ? E. C. Poultney, 944
Oscillator, Solid State, for Microwave Frequencies, Bell Telephone Laboratories, 389
Oscillograph, Laboratoire D'Electrotechnique et D'Electronique Industrielle, 924
Recording on Southern Region, British Railways, 375
String, S.E.F.R.A.M., 935
Oscillographic Observation of Short Duration Arcs, (Report, 1006)
Outdoor Oil Circuit Breaker, 132kV, 5,000MVA, General Electric Co., Ltd., 691
Outfall, Northern, Construction of Secondary Treatment Plant, 610
Ovens and Furnaces, (Patent, 779)
Overbridge, Flat Slab Railway, 915
Overhead Power Transmission, Aluminium Conductors, (B.S.I., 269)
Railway, Liverpool, 897
Overseas, Selling, 111
Trade, 32, 111, 270, 346, 500, 620, 695, 810, 848, 959, 996
Trade by Air, 916
Trade, British, 150
Overspeed Control Unit, Smiths Industrial Instruments Ltd., 571
Oxidation of Carbide Alloys, High-Temperature, 646
Plant, Low Temperature, W. C. Holmes and Co., Ltd., 769
Oxygen-Cutting Equipment for Ship's Deck Beams, British Oxygen Gases Ltd., 253
Cutting Titanium and Titanium Alloys, G. Coates, 132
Recorder, Cambridge Instrument Co., Ltd., 766

P

Packaging Exhibition, 121
Export, E. H. (Service Depot) Ltd., 958
Paddle Tugs for the Navy, Diesel-Electric, G. W. Tripp, 486
Padiham "B" Power Station, (968)
Power Station, Continuous Slagging Boiler for, Simon-Carves Ltd., (626)
Paints, Corrosion-Resistant, E. and F. Richardson Ltd., 461
Pakistan Railways, Large Vacuum Impregnator for, 701
Paper Capacitors, Impregnated, (Report, 1006)
and Cloth Plant, Abrasive, English Abrasives Corporation, (1004)
Papers for Electrical Purposes, (B.S.I., 269)
Parallel Screw Threads of Whitworth Form, (B.S.I., 609)
Paris, Chemical, Rubber and Plastics Exhibition, 190
Exhibition, Machinery, 1857, 782
Opera, German Loudspeaker System, 464
and Zurich, Autorail Express Trains, 869
Park Lane Improvement Scheme, 631
Paroi Mobile, Convection Forcee sur, (Report, 302)
Particle Accelerator at Brookhaven National Laboratory, 25,000MeV, 507
Accelerator, Van de Graaff, 58
Size Analysis, Improved Methods, T. H. Hughes, 860
Particles in Pipes, Flow of Suspensions of Non-Cohesive Spherical, H. E. Rose and H. E. Barnacle, 898, 939
Passage, Annular Coolant, Radial Temperature Distribution, Henry Barrow, 713
Passenger and Cargo Building at Southampton, (Plate 2, 4.1.57)
and Cargo Liner "Argyllshire", Greenock Dockyard Co., Ltd., (Plate 10, 4.1.57)
Cargo Liner "Norman Prince", Burntisland Shipbuilding Co., Ltd., (Plate 10, 4.1.57)
and Cargo Ship "Scillonian", John I. Thornycroft and Co., Ltd., (Plate 11, 11.1.57)
Coaches, Prototype, for British Railways, 228
Launch, High-speed, John I. Thornycroft and Co., Ltd., 224
Locomotive, "King" 4-6-0 Express, (Plate 7, 4.1.57)
Ship "Duke of Lancaster", Harland and Wolff Ltd., (Plate 11, 11.1.57)
Stock, Disc Brakes for Railway, Girling Ltd., (38)
Train Service, Melbourne-Sydney, 250
Past, Pickings from, 1857, 4
Patents in Germany, Utilisation, 584
Patterns for Moulding, Manufacture of Plastics, 617
Pay Claim, Railway Shopmen's, 733
Peace, Open Skies for, Exhibition, 43
Pedal Cycles, Motorised, 848
Penetration and Diffusion of Gamma-Rays, 193
Performance Tests, Saunders-Roe "Princess" Flying Boat G-ALUN, Air and Water, (Report, 894)
Permissible Backlash Between Gear Teeth, W. A. Tuplin, 951
Perotan Island Lighthouse, 226
Perspective Drawing, Instrument, Franz Kuhlmann, 273
Petrol Engine, "Vedette"; Morris Motors Ltd., 102
and Fuel Oil, 462
Rationing and Industry, 43
Petroleum Consumption, (276)
Gas Plant in Austria, Liquid, BP Benzin und Petroleum A.G., 544
Products, Closed Flash Point, (B.S.I., 837)
Phase-earth Loop Impedance Tester, Ferranti Ltd., 572
Phase Transformation in Metals, Mechanism, (Review, 955)
Philadelphia, International Atomic Exposition, 889, 927, 965, 1000
Phosphorus Factory, Electrical Machinery, General Electric Co., Ltd., 492
Photo-elastic Equipment, Societe Photostress, 925
Photoelectric Absorptiometer, Spekker, Metallurgical Analysis by means of, F. W. Hayward and A. A. R. Wood, (Review, 369)
Photographic Exhibition, Reinforced Concrete Structures, 935
Negatives, Electronic Printer for Aerial, Cintel-Television Ltd., 914
Photography, Proceedings of the Third International Congress on High-Speed, (Review, 759)
Photo-Transistor Relay, Metropolitan-Vickers Electrical Co., Ltd., 579
Physical Metallurgy, Principles, and Alloy Series in Physical Metallurgy, Morton C. Smith, (Review, 409)
Society Exhibition, (428) ; 494 ; Year Book, 1956, (99)
Physics, Relaxation Methods in Theoretical, Sir Richard Southwell, (Review, 255)
Physiology, Laboratory for Flight, 812
Pickings from the Past, 1857, 4
Pick-up, Magnetic Dynamic Gramophone, Philips Research Laboratories, 191
Torsional Vibration, Southern Instruments Ltd., 494
Pick-ups, Vibration, Electrodynamic Calibration of, 586
Pictorial Illustration and Freehand Drawing for Draughtsmen, W. H. Kerry, (Review, 569)
Pilot, Automatic, Decca Navigator Co., Ltd., 378
Pilotless Weapon Northrop, SM 62 "Snark" Offensive, 922
Pinch Valve, Dosapro, 190
Pinion Press, Portable Hydraulic, 881
Pipe Development, Plastic, Foster Brothers Ltd., 881
Pipe and Tube Couplings, (Patents, 665, 817, 970)
Pipeline Industries Guild, Newly Formed, (314)
Middle East, 810
Trans-Iranian, 513
Pipelines, Industrial Glass, James A. Jobling and Co., Ltd., 415
(Patent, 817)
Pipes, Asbestos Cement Pressure, (B.S.I., 149)
Flow of Suspensions of Non-Cohesive Spherical Particles in, H. E. Rose, and H. E. Barnacle, 898, 939
Television Equipment for Testing Welded, Phoenix Rheinrohr A.G., 772
Tubes and Conduits, (Patent, 893)
Piston Rings and Commutator Brushes, Hydrodynamic Lubrication, W. Lewicki, 84, 122
Pit Working Contracts, Open, for Nchanga, 383
Plain Bearing Failures, P. P. Lover, (694)
Plan, French Railways' Modernisation, 621
Plane, Remote Controlled Target, "CT-20", 922
Planetarium, Projection, and Shell Construction, Walther Bauersfeld, 755, 796
Planing Machine, Heavy-Duty, George Richards and Co., Ltd., 577
Machine, Heavy Duty, Noble and Lund Ltd., 994
Planning Hong Kong Airport, 357
Problems, 150
Plans on British Railways, Progress of Modernisation, 417
for Second Transatlantic Telephone Cable, 593
Plant, Abrasive Cloth and Paper, English Abrasives Corporation, (1004)
Installed in C.E.A. Power Stations in 1956, Generating, 70
Plants, German Nuclear Power, 423
Sodium Graphite Reactor Electric Power, 424
Solvent Extraction, Iwel Ltd., 459
Plastic Pipe Development, Foster Brothers Ltd., 881
Polytetrafluoroethylene, Imperial Chemical Industries Ltd., 305
Plastics Convention, (702)
Factory, Reinforced, Ashdowns Ltd., 841
Glass-Reinforced, Structural Application, Mendip (Chemical Engineering) Ltd., 380
Institute, Apprenticeship in the Plastics Industry, 553
Methods of Testing, (B.S.I., 723)
Patterns for Moulding, Manufacture of, 617
Products, Tool Treatments (Chemicals) Ltd., (833)
Rubber and Chemical Exhibition, Paris, 190
Plate, Articulated-Steel—, Conveyor, Richard Sutcliffe Ltd., 345
Bending Machine, Heavy-Duty Three-Roll, Bronx Engineering Co., Ltd., 619
Conditions for Unstable Rupturing of a Wide, G. M. Boyd, 644
Conveyor, Curved Track, Demag A.G., 925
Levelling Machine, Heavy, Head Wrightson Machine Co., Ltd., 460
Plates, Controlled Stretch, James Booth and Co., Ltd., (252)
Ultrasonic Flaw Detection Equipment, James Booth and Co., Ltd., 692
Plating Plant, Electro-Chemical Engineering Co., Ltd., 684
Platinum Metals Review, 137
Plotting, Automatic Position, Standard Telephones and Cables Ltd., 344
Plymouth "B" Power Station Extension, (97)
Point, Closed Flash, of Petroleum Products, (B.S.I., 837)
Controller, Railway Dual, Siemens and General Electric Railway Signal Co., Ltd., 379
Policy, British Defence, 12
Fighter, (Leading Article, 279)
Polish, Anglo-, Trade Agreement, 32
Pollution, Abatement of Water, 622
in the Thames Estuary, 631
Polythene Tube Joint, Mange Plastics Ltd., 653
Polytetrafluoroethylene, Imperial Chemical Industries Ltd., 305
Port of Narvik, Ore-handling Facilities, (Plate 14, 11.1.57)
Portable Gas Detector, Dragerwerk Heinr. and Bernh., 423
Portal Crane, 3-ton, M.A.N., (Plate 14, 11.1.57)
Portugal, Multi-Channel Radio-Telephone Link, Automatic Telephone and Electric Co., Ltd., 149
Portuguese Railway Electrification, 151
Position Plotting, Automatic, Standard Telephones and Cables, 344
Positioning Machine, Electronically-Controlled Co-ordinate, Mullard Ltd., 724
Positive Axle Lubrication, Leyland, (732)
Post-Graduate School of Applied Dynamics, 957
Post Office, Mechanised Sorting Equipment, 688
Potters Bar Railway Tunnel, Progress, 612
Powder Fire Extinguisher, Dry, Nu-Swift Ltd., 541
Metallurgy, 897
Metallurgy and Nuclear Research Today, H. W. Greenwood, 988
Metallurgy, Pusher Furnace, General Electric Co., Ltd., 915
Powders, Dry, Air Vortex Classifier for, Sharples Centrifuges Ltd., 378
and Sands, Hydraulic Separators for Grading, Millars Machinery Co., Ltd., 187
Power Cable, British Columbia—Vancouver Island 138kV Submarine, T. Ingledow, R. M. Fairfield, E. L. Davey, K. S. Brazier and J. N. Gibson, 678
Cables, Submarine, 9
Canadian Water, 161
Capital Investment in, 420

Conference, World, 960 ; Eleventh Sectional Meeting, 386 ; Sectional Meeting, (38)
Consumption Forecasts, Electric, (Report, 256)
Convention, British Electrical, 936
Conventional Aspects of Nuclear, H. G. Rickover, 520
Development and Nuclear Reactions, Sir John Cockcroft, 418
Developments, Scottish Water, 367
Driven Rail-Mounted Tower Cranes, (B.S.I., 723)
Effect of Nuclear, on C.E.A. 275kV Transmission System, 721
Future of Nuclear, Sir Christopher Hinton, 442
Gallery at the Science Museum, Electric, 783
German Nuclear, 773
for Industry, Electrical, (Leading Article, 972)
in 1956, Nuclear, 5
Nuclear, Generation Costs, 937
Plants, Commercial Agreements for Pressurised-Water, 161
Plants, Floating Station for Nuclear, A. P. Mason, (Letter, 338)
Plants, German Nuclear, 423
Plants, Nuclear, Floating Stations, F. H. E. Myers, (Letter, 214)
Plants, Sodium Graphite Reactor Electric, 424
Presses, Turner Brothers (Birmingham) Ltd., 684
Producing Nuclear Reactors, Gas Cooling, R. J. Beale, 974
Production : The Practical Application of World Energy, Hans Thirring, (Review, 139)
Programme, Great Britain's 6,000MW Nuclear, 357
Russian Water, 849 ; (Leading Article, 820)
Schemes in 1956, American Water, 35, 76
Services in Europe, Electric, (Report, 256)
Station, Berkeley Nuclear, 143, 650, 991,
Station, Calder Hall Nuclear, (Plate 1, 4.1.57)
Station, Castle Donington, (Plate 2, 4.1.57)
Station, Eddystone Steam, 736, 774
Station Equipments, Mobile Workshops for Servicing, British Thomson-Houston Co., Ltd., 580
Station Extensions, Plymouth "B" ; (97)
Station, Gas Turbine, Venezuela, Ruston and Hornsby Ltd., 618
Station, Inauguration of Work on Bradwell Nuclear, 121
Station, Kuibyshev Hydro-Electric, 420, 463
Station, Marchwood, 908
Station, Operating Experience at Calder Hall, 241
Station, Padiham "B", (968)
Station, Padiham, Continuous Slagging Boiler for, Simon Carves Ltd., (626)
Station, Scotland's First Nuclear, 216, 260
Station at Stockum, Gersteinwerk, (Plate 12, 4.1.57)
Station at Thorpe Marsh, Proposed Coal-Burning, 809
Station, Tilbury "A", (Plate 8, 4.1.57)
Station, Welding at Calder Hall, Gordon Brown, (Letter, 300)
Station for West Germany, 15MW Nuclear, Mitchell Engineering Ltd., 575
Station at Williamson Diamond Mines, 373
Station, Willington "B", 200MW Turbo-Generators, Metropolitan-Vickers Electrical Co., Ltd., 173
Stations, C.E.A., Efficiencies, 580
Stations, Generating Plant Installed in C.E.A., in 1956, 70
Stations, Hams Hall, (Plate 8, 4.1.57)
Supply, "No-Break" Alternator Set for Standby, Lister-Blackstone, 912
System Communications, E. Openshaw Taylor, (Review, 682)
Transformer, 400kV, British Thomson-Houston Co., Ltd., 845
Transformers in Service, Mechanical Strength, E. T. Norris, 331
Transformers, Standard Telephones and Cables Ltd., 572
Transmission, Overhead, Aluminium Conductors, (B.S.I., 269)
Transmission, (Patents, 39, 79, 157, 197, 391, 589, 627, 703, 741, 818, 893)
Unit, Airfield, Petbow Ltd., (276)
Wind, Generation of Electricity by, (Report, 1006)
Practical Training of Mechanical Engineers, 395
Practice American Civil Engineering, (Review, 409)
Restrictive, 810
and Theory in Automation, E. M. Hughes-Jones, (Review, 174)
Unification of Screw Thread, D. G. Sopwith and J. E. Field, 793
Praise and Dispraise of the "Mechanicals", (Leading Article, 394) ; (Letter, 484)
Precast Concrete Industry, Congress, 812
Concrete, Nine-Storey Building Frame, Concrete Ltd., 973
Concrete Structural Work, Heavy, 370
Concrete Works, Modifications, Modular Concrete, Co., 496
Precipitator Unit for Detecting Burst Slugs, Plessey Nucleonics Ltd., 58
Precise Measurement of Length, Surveying Instrument, 538
Precision Comparator for Small Cylindrical Work, J. C. Evans and W. F. Atkins, 716
Contact, Centre National D'Etudes de Telecommunications, 924
Mechanical Rubber Mouldings, Reliance Rubber Co., Ltd., (276)
Workshop Projector, Optical Measuring Tools Ltd., 377
Precooling Store for Table Bay, 921
Preformed Fatigue Cracks, Fatigue Strength of Specimens Containing, N. E. Frost, 864
Prehistoric and Early Iron in the Old World, Notes, H. H. Coghlan, (Review, 101)
Premiums for Technical Articles, (681)
Preservation, Timber, (Review, 953)
Press for Aircraft Components, 15,000-ton, G. Siempelkamp and Co., Machinenfabrik, 545
Brake, 60-ton, Bronx Engineering Co., Ltd., 684
Duplex Quenching, W. Ferd. Klingelnberg, 232
8,000-ton Extrusion, Hydraulik, 851
Hydraulic, for Shaping Radioactive Materials, Loewy-Hydropress Division, 777
Installations, Heavy, and Rolling Mills in America, (Plate 16, 11.1.57)
Oil-Hydraulic Multi-Purpose, Becker and van Hullen, 885
Operation, Automatic Control Device, Press Guards Ltd., 188
Portable Hydraulic Pinion, 881
Relations and Industry, Peter Hale, (Review, 447)
Shop Under Construction, Briggs Motor Bodies Ltd., 650
Tablet, Apex Construction Ltd., 994
Toggle, F. J. Edwards, Ltd., (930)
Presses, Power, Turner Brothers (Birmingham) Ltd., 684
Pressing Refinement, Rubber, Short Brothers and Harland Ltd., 380
Pressure Cabin, Failure in, (Report, 19)
Die Casting Conference, International, 698
Jets, Rotor Tip, Fairey Aviation Co., Ltd., 686
High, Hydraulic Lock at, K. J. Whiteman, 554
Measurements, Ship Hull, N. Hogben, 645
Pipes, Asbestos Cement, (B.S.I., 149)
Transducers, O.N.E.R.A., 925
Pressurised Assembly Cabinet, Air-Conditioned, British Manufactured Bearings Co., Ltd., 380
Water Power Plants, Commercial Agreement' 161
Preston to Birmingham Motorway, Route, 593
Prestressed Concrete, International Conference, (142)
Concrete, International Congress, (156)
Concrete in the Netherlands, 231
Concrete Runways, 319
Concrete, Wire, for, British Ropes Ltd., (930)
Price Stability and Productivity, 883
Prices, Basic Materials, 111
and Costs, 883
Steel, 308
Principles of Physical Metallurgy, and Alloy Series in Physical Metallurgy, Morton C. Smith, (Review, 409)
Printed Circuits, Technograph Electronic Products Ltd., 684
Printer, Electronic, for Aerial Photographic Negatives, Cintel-Television Ltd., 914
Problem, General Survey of Ground Movement, J. T. Whetton, 562
Problems of Aircraft Production, R. Maudling, 71
in the Application of Nuclear Energy, Engineering, Sir Claude D. Gibb, 282, 320
Planning, 150
of the Small Utility Car, D. Giacosa, 616
for the Steel Industry, Dorman Long and Co., Ltd., 32
Surface Leakage, on High-Voltage Insulators, 387
Process Control, Industrial, Elliott Brothers (London) Ltd., 725
Control, International Committee, 113
Controller, Electronic, Evershed and Vignoles Ltd., 765
Heavy Water Separation, 503
New Nodular Iron, 647
Processes, Unsteady Thermodynamic, A. P. Hatton, 949
Processing Equipment, Film, Kodak Ltd., 269
Equipment, X-Ray, Kodak Ltd., 461
Technique, Textile, 461
Technique, Textile, English Glass Co., Ltd., (588)
Producer Gas Conference, (428)
Gas Plant for Cars and Tractors, Aktiebolaget Volvo, 386
Production, Aluminium, in the Ohio River Valley, 427
Coal, 229, 581
of Die Castings, Line, Wolverhampton Die Casting Co., Ltd., 453
Employment and Defence, 657
Engineering in Universities, Teaching, 189
German Machinery, 464
Industrial, 270, 542
Iron Castings, 883
Iron and Steel, 308, 462, 620, 770, 959
Liquid Hydrogen, Laboratories D'Electrostatique de Physique du Metal, 924
of Music, Electrical, Alan Douglas, (Review, 722)
in 1956, European Coal and Steel Community, 348
Northern Ireland Census, (156)
Problems of Aircraft, R. Maudling, 71
and Research, Statistical Methods, O. L. Davies, 799)
of Salt at Whyalla, South Australia, 382
of Steel, Film, United Steel Companies Ltd., (664)
of Steel in the Saar, 192
of Stepped Aluminium Alloy Extrusions in the United States, 114
of Trade Names, Computer, 503
Productivity, 150
and Local Co-operation, German, 152
and Price Stability, 883
and Wage Negotiations, (Leading Article, 511)
Products, Closed Flash Point of Petroleum, (B.S.I., 837)
Plastics, Tool Treatments (Chemicals) Ltd., (833)
Produktion und Entwicklung, Aus, (Report, 339)
Professional Engineers Appointments Bureau, Annual Report, 707
Engineers, J. G. Orr, 420
Professorship at the University of Chicago, Enrico Fermi, 815
Programme, American Missile Development, 813
Britain's Road, 395
Controller Unit, Heenan and Froude Ltd., 571
Great Britain's 6,000MW Nuclear Power, 357
of Modernisation, National Coal Board, (Plate 4, 11.1.57)
Working to a, (Leading Article, 393)
Progress at Berkeley Nuclear Power Station, 991
of Clifton Bridge, Nottingham, 872
of Modernisation Plans on British Railways, 417
Social, and Automation, S. Lilley, (Review, 759)
in Steam Turbine Design, Technical, L. S. Robson, 978
Technical, and Industry, (Leading Article, 819)
Technical, and Industry, 867
Projection Planetarium and Shell Construction, Walther Bauersfeld, 755, 796
Projector, High-Intensity Infra-Red, Metropolitan-Vickers Electrical Co., Ltd., 461
Precision Workshop, Optical Measuring Tools Ltd., 377
Promotion of Work and Workers, International Congress, 923
Propellers, 16in. Model, Effect of Cavitation in the Performance of a Series, R. W. L. Gawn and L. C. Burrill, 558
Properties of Combustion Gases, (Review, 139)
of Copper-Nickel Alloys at High Temperatures, Tensile, 988
Effect of Environment on Creep-Rupture, 647
of Metals, Mechanical, Effect of Interrupted Loading, E. W. Evans, 292, 325, 419
of Steels, Mechanical, at Elevated Temperatures, (B.S.I., 837)
Proposal for a Cement Works in Qatar, (452)
Proposals, Budget, 381
for the Reorganisation of the Electricity Supply Industry, 9
Proposed Coal Burning Power Station at Thorpe Marsh, 809
Propulsion, French Nuclear Marine, 660
Jet, de Havilland, (390)
of Merchant Ships, Nuclear, 4
Naval Nuclear, 281
Unit, Regenerative Cycle Two-shaft Gas Turbine General Electric Company, (Plate 5, 4.1.57)
Prospects, Agricultural Machinery Industry's, 150
Prot Fatigue Tests on High-Strength Steel, 989
Protecting X-Ray Workers, 996
Protection, Cathodic, Metal and Pipeline Endurance Ltd., (236)
Fire, 996
of Steel Chimneys, Rust, Southern Metalife Ltd., (468)
Protective Gloves, Heat and Abrasion Resistant, George Angus and Co., Ltd., (930)
Relaying, The Art and Science of, C. Russell Mason, (Review, 569)
Safety Slings, Cable Covers Ltd., (374)
Prototype Passenger Coaches for British Railways, 228
Protractor, Vernier Bevel, MZB Messzeug G.m.b.H., 273
Psychology, Industrial, 462
Pulpwood Consumption, Swiss, 735
Pumped Storage Scheme, Geesthacht, 543

PUMPS

Boiler Feed Pump, Ruhrpumpen G.m.b.H.' 773
Centrifugal Pumps with Mechanical Shaft Seals, Girdlestone Pumps Ltd., (540)
Circulating Pump, Breguet, 190
Diaphragm Pump, Pelletier, 190
Easily Cleaned Rotary Pumps, Plenty and Son, Ltd., (413)
Electrification of the Severn Tunnel Pumping Stations, 319
How's Ship Pump and Fire Engine, 1857, 630
Hydraulic Transmission, Kieler Howaldtswerke A.G., 999
Linear Induction Pumps for Liquid Metals, A. S. Fenemore, 752
Patent, 353
Pump for Highly Corrosive Chemicals, Crane Packing Ltd., (751)
Punched Cards, Standards for, 450
Purfleet and Dartford, Tunnel Under the Thames Between, 531
Purifying Plant, Portable Water, Permutit Co., Ltd., (664)
Pusher Furnace for Powder Metallurgy, General Electric Co., Ltd., 915
P.V.C. Fume Removal Fans, Keith Blackman Ltd., (105)
Pylons, Towers and Masts, Design of, (Report, 339)

Q

Qatar, Proposal for a Cement Works, (452)
Quality, Supersaturation in Steam Expanding from a Low Initial, Denis J. Ryley, 708
Quantometer, Applied Research Laboratories, (Plate 7, 11.1.57)
Quarry Shovel, Menck and Hambrock G.m.b.H., 504
Quench Furnace, Sealed, Birlec Ltd., 107
Quenching Press, Duplex, W. Ferd. Klingelnberg, 232

R

Radar Calibration, Ground, (797)
Radial Temperature Distribution in an Annular Coolant Passage, Henry Barrow, 713
Radiation, Gamma, Laboratory for Lubricants, 877
Radio Communication and Electronic Engineering Association, Annual Luncheon, 201
Communications Equipment, Exhibition of Wide-Band, 266
and Electronic Components, Fixed Capacitors, G. W. A. Dummer, (Review, 138)
Seeing by, (Leading Article, 592)
Telephone Link For Portugal, Multi-Channel, Automatic Telephone and Electric Co., Ltd., 149
and Television, Transistors in, Milton S. Kiver, (Review, 408)
Radioactive Materials, Hydraulic Press for Shaping, Loewy-Hydropress Division, 777
Radioactivity from Nuclear Detonations, Global Distribution, 233
Radiography, Industrial, 5MeV Linear Accelerator, Mullard Ltd., 654
Rail Lubrication, Automatic Crane and Crane, Centralube Ltd., (809)
Rail-Mounted Power-Driven Tower Cranes, (B.S.I., 723)

RAILWAY GENERAL MATTERS

A.C. Railway Electrification, 55
American 4-4-0 Locomotives, 366
Automatic Gear Changing on Diesel Railcars, Self-Changing Gears Ltd., (980)
Train Control, (930)
Autorail Express Trains Between Paris and Zurich, 869
Beyer-Garratt Locomotives for Rhodesia Railways, Beyer Peacock and Co., Ltd., 669
"Brewery Shunters", The Last, (38)
British Railway Accidents in 1955, 83
Railways in 1956, 28
Cars by Rail, (930)
Churchward, George Jackson, (Leading Article, 200) ; Kenneth H. Leech, (Letter, 300) ; W. A. Tuplin, (Letters, 254, 368)
Churchward's Locomotives : The Origin of the Species ? E. C. Poultney, 944
Colour-Light Signalling Installation at Cowlairs, 454
Consideration of Weight Transfer on B-B Electric Locomotives, E. H. Croft, 172
Consumption of Smoke upon Railways, 1857, 42
Crane, 120-ton Railway, Fried. Krupp, 734
Developments in France and Germany, 73
Diesel-Electric Locomotives for British Railways, 1,000-h.p., English Electric Co., Ltd., 913
Diesel-Electric Trains for the Southern Region, 732
Diesel-Mechanical Shunting Locomotive, Ruston and Hornsby Ltd., 419
Diesel Railcars for Northern Ireland, 882
Railway Traction, (Leading Article, 472) ; E. C. Poultney, (Letter, 568)
Shunting Locomotive for the Swedish State Railways, 272
Trains, Six-axle Twin-Car, Linke-Hofmann-Busch, 926
Disc Brakes for Railway Passenger Stock, Girling Ltd., (38)
Dual Point Controller, Siemens and General Electric Railway Signal Co., Ltd., 379
Eastern Region Modernisation Works, (458)
Electric Locomotives Ordered for British Railways, 513
Electrification Extension to Southend-on-Sea (Victoria), 4, 68
Exhibition of Components Required by British Railways, 201
Flat Slab Railway Overbridge, 915
Forsyth's Improvements in Locomotive Engines, 1857, 972
French Experimental Railcar, 584
Locomotive Experiences, J. T. van Riemsdijk, (Letter, 138)
Railways' Modernisation Plan, 621
Gear Drives for Locomotives, R. G. Jarvis, 783
German Goods Wagons, 384
Oil-Fired Locomotives, 584
Goods Depot for Barking Area, (588)
Heavy Express Locomotive Trials on the Western Region, O. S. Nock, 560, 594
Hydraulic Buffers for Railway Stock, Dowty Hydraulic Units Ltd., 344
Introduction of Gas for Railway Trains, 1857, 821
"King" 4-6-0 Express Passenger Locomotive, (Plate 7, 4.1.57)
Liverpool Overhead Railway, 897
Locomotive Trials—Western Region, E. C. Poultney, (Letter, 798) ; O. S. Nock, (Letter, 798) ; W. A. Tuplin, (Letter, 836)
Main Line Diesel-Electric Locomotive for British Railways, English Electric Co., Ltd., 859
Line Diesel-Electric Locomotive for Malayan Railway, 1,500-h.p., English Electric Co., Ltd., 574
Line Diesel-Electric Trains, Metropolitan-Cammell Carriage and Wagon Co., Ltd., 521
More Steam Locomotive Development, (Leading Article, 591)
"Merchant Navy" Locomotive No. 35018, (Plate 7, 4.1.57)
Moroccan Railways, High-speed Railcars, De Dietrich et Cie, 230
Multiple-Unit Electric Trains on London Midland Region, 844
New Offices for British Railways Central Electrical Staff, (376)
Numbering of Diesel Locomotives, (803)
Oscillograph Recording on Southern Region, British Railways, 375
Passenger Train Service, Melbourne-Sydney, 250
Patents, 117, 277, 315, 741, 931
Portuguese Railway Electrification, 151
Progress of Modernisation Plans on British Railways, 417
of Potters Bar Railway Tunnel, 612
Prototype Passenger Coaches for British Railways, 228
Railway Apprentice Training School, London Midland Region, (559)
Civil Engineer's Training Centre, (588)
Electrification, (Letter, 485)
Shopmen's Pay Claim, 733
Station : An Architectural History, Carroll L. V. Meeks, (Review, 987)
Travel Exhibition, (968)
Works in South Africa, 919
Sleet Tenders on London Transport, 226
Solid Rolled Steel Railway Wheels, (B.S.I., (67)
Wheel and Disc Mill, Schloemann A.G., 347
Some Fairbairn Locomotives, E. C. Poultney, 305

Spacing of Railway Sleepers on South African Railways, 227
Standard Class 5 Mixed Traffic Locomotive, (Plate 7, 4.1.57)
Steam Locomotive, O. S. Nock, (Review, 485)
Steels, Slabs, Plates, Sections, Bars and Rivets, (Railway Rolling Stock), (B.S.I., 444)
Track Circuiting Equipment for British Main Line Electrification, Westinghouse Brake and Signal Co., Ltd., 460
Recording Trolley for British Railways, 845
Traction Engine Railway Locomotives, R. A. S. Abbott, 165, 205 ; A. L. Lambert, (Letter, 682) ; Geoffrey W. King, (Letter, 300) ; Stephen B. Fletcher, (Letter, 758)
Traffic Receipts, 270
Trends in Canadian Railway Equipment, 673
Trials on the Western Region, W. A. Tuplin, (Letter, 682)
Union of South Africa Railway and Harbour Developments, 271
Vacuum Impregnator for the Pakistan Railways, Large, 701
Wages, Railway, 189, 500, 542, 581
Wagon Haulage Equipment, Railway, National Coal Board, 307
Western Region, 110 M.P.H., W. J. Alcock, (Letter, 722)
World Railways, 1956-57, (Review, 301)

RAILWAY ELECTRIFICATION

A.C. Railway Electrification, 55
Electrification Extension to Southend-on-Sea (Victoria), 4, 68
Portuguese Railway Electrification, 151
Railway Electrification, (Letter, 485)
Track Circuiting Equipment for British Main Line Electrification, Westinghouse Brake and Signal Co., Ltd., 460

Ram, Hydraulic, N. G. Calvert, 597
Jet "Griffon 02", First Flight, SNCAN, 999
Rates, Changes in Wage, 32, 229, 381
Rating, Re-, Industrial, 241
Re-, of Industry, (Leading Article, 280)
Rational Tee Slot Design, Contribution Towards, H. Fessler, 904
Rationalised Engine Range, Ford Motor Co., Ltd., 802
Rationing of Petrol and Industry, 43
Reaction, Discovery of new Nuclear, at Berkeley, 274
Reactions, Nuclear and Power Development, Sir John Cockcroft, 418
Reactor, American Research, Export to Japan, 75
for Brazil, American Research, 507
Contract for Nuclear-Powered Merchant Ship, 891
Dounreay Fast, Heat Exchanger Banks, John Thompson Ltd., (Plate 3, 11.1.57)
Electric Power Plants, Sodium Graphite, 424
Experiment, Sodium, Begins Operation, U.S., 967
Experimental Boiling Water, at the Argonne National Laboratory, 623, 661, 699
Fast, at Dounreay, (Plate 2, 11.1.57)
Helium Drier and Absorber for "Dido" Research, British Oxygen Engineering Ltd., 654
"NERO" Experimental Low-Energy, 499
Research, for Venezuela, 75
Technology Training, 745
Tiers, Cast-in-Concrete, British Thomson-Houston Co., Ltd., 56
Reactors, Gas Cooling in Power-Producing Nuclear, R. J. Beale, 974
Research, at Harwell, (Plate 2, 11.1.57)
Reading Automation, Electronic, Solartron Electronic Business Machines Ltd., 414
Reamers for High-Tensile Steels, Short Brothers and Harland Ltd., 99
Received, Books, 175, 215, 256, 302, 339, 369, 409, 485, 529, 569, 609, 649, 683, 723, 759, 799, 837, 871, 907, 955, 987
Recent First Flights, 809
Recherches sur le Flambement de Colonnes en Acier A37, (Report, 416)
Reclamation and Clearance of Jungle, C. S. L. Frances, 267
Zuider Zee, 997
Reconstruction of the Great North Road, (854)
of Shoreham Harbour, (Plate 11, 4.1.57)
Record, Air Speed, C. H. Chichester Smith, (Letter, 174)
Recorder, Oxygen, Cambridge Instrument Co., Ltd., 766
Recording Galvanometer, Bazin and Setton, 273
Oscillograph, on Southern Region British Railways, 375
Trolley, Track, for British Railways, 845
Recoverable Test Vehicle, Bristol "Bobbin", 497
Recovery Plant, Sulphur, Mond Nickel Co., Ltd., (236)
Rectifiers in Industry, Germanium, 57
Water Cooled, Brown, Boveri et Cie, 771
Reduction of Hands at Woolwich, 1857, 241
Refinery, Canadian Oil, British Petroleum Co., Ltd., (445)
Developments at Stanlow, Shell Petroleum Co., Ltd., 728
Oil, for Turkey, (702)
Refining and Using Nickel, L. B. Pfeil, 720
Reflective Signs, (314)
Refractory Nozzle Blades for High-Temperature Gas Turbines, 251
Regenerative Cycle, Two-shaft Gas Turbine Propulsion Unit, General Electric Company, (Plate 5, 4.1.57)
Furnace, Centenary, 337
Glass Furnace, United Glass Bottle Manufacturing Co., Ltd., 57
Register of British Manufacturers, F.B.I., 1957, (Review, 215)
Whitworth, H. H. Johnson and F. T. Barwell, (Review, 649)
Regulations, Motor Vehicle, (968)
and Rules for the Construction and Classification of Steel Ships, (Review, 409)
Regulator, Air-Cooled Induction, Laurence, Scott and Electromotors Ltd., 572
Reinforced Concrete Association, Anniversary, 935 ; Photographic Exhibition of Concrete Structures, (854)
Concrete Structures, Photographic Exhibition, 935
Concrete, Ultimate Strength Design, 110
Plastics Factory, Ashdowns Ltd., 841
Reinforcing Fabric for Waterproofing, Fothergill and Harvey (Sales) Ltd., (854)
Relations, Labour, 657
for Management, Human, Edward C. Bursk, (Review, 954)
Press, and Industry, Peter Hale, (Review, 447)
Relaxation Methods in Theoretical Physics, Sir Richard Southwell, (Review, 255)
Relay Activated by Electrorestrictive Deformation, Metropolitan-Vickers Electrical Co., Ltd., 541
Galvanometer, A.O.I.P., 464
Photo-Transistor, Metropolitan-Vickers Electrical Co., Ltd., 579
Relaying, The Art and Science of Protective, C. Russell Mason, (Review, 569)
Relighting, Turbine, 213
Remote Control, Electric Cable, Forges et Ateliers de Constructions Electriques de Jeumont, 660
Controlled Target Plane "CT-20", 922
Indication, "Multiplexing System, General Electric Co., Ltd., 179
Operation and Observation, Savage and Parsons Ltd., 377
Removal Compound, Scale, Walterisation Co., Ltd., (968)
Fans, P.V.C. Fume, Keith Blackman Ltd., (105)
Remploy Factories, Sponsorship Schemes, Remploy Ltd., 303
Renewable Carbide Tip Tools, Wickman Ltd., 458
Reorganisation Proposals for Electricity Supply Industry, 9
Schemes, Two Colliery, 140, 180
Repair, Complicated Watches and their, Donald De Carle, (Review, 907)
of a Large Casting, Metalock (Britain) Ltd., (407)
Repetitive Inflation of Tubeless Tyres, Weldall and Assembly Ltd., 539
Report, Economic, (72)
Euratom, 772
on Higher Technological Education, 173
on Industrial Gases, Monopolies Commission, 72
Manchester City Engineer's, (314)
Re-rating, Industrial, 241
of Industry, (Leading Article, 280)
Research Aircraft, Short S.C.1, (588)
Australian Aeronautical, 880
Buildings and Training Centre, 707
Centre at Lincoln, Internal Combustion, Ruston and Hornsby Ltd., 761
Computer Laboratory, Washington University, (351)
and Development, Aircraft, Elliott Brothers (London) Ltd., 161
Establishment Laboratory, Safety in Mines, 731
Foundation, Armour, European Office, 272
Headquarters of Detergent Factory, Thomas Hedley and Co., Ltd., 956
Hydraulics, 821
in Hydromechanics, 879
in Industry, Scope for Operational, Stafford Beer, 434, 479
on Injuries from Road Accidents, 43
Laboratory, Steel Castings, 910
Microscope, McArthur Microscopes Ltd., 494
in Nuclear Science, (Leading Article, 318)
and Production, Statistical Methods, O. L. Davies, (Review, 799)
Progress, Engineering, in the Union of South Africa, 383
Reactor for Brazil, American, 507
Reactor, Helium Drier and Absorber for "Dido", British Oxygen Engineering Ltd., 654
Reactor to Japan, Export of American, 75
Reactor for Venezuela, 75
Reactors at Harwell, (Plate 2, 11.1.57)
Scholarship, Structural Aluminium, (196)
Scientific, in British Universities, 1955-56, (Review, 215)
Timber, 935
Today, Nuclear, and Powder Metallurgy, H. W. Greenwood, 988
Workers and Graduate Students, D.S.I.R. Grants, 121
Reseaux Interconnectes, Sur La Stabilite Dynamique, (Report, 134)
Reserves, World Iron Ore, 270
Reservoir and Dam, Garrison, 76
Reservoirs, Experiments to Reduce Evaporation Loss, (468)
Resin, High-Temperature Laminating, Bakelite Ltd., 689
Resistant Cables for Aircraft, Fire, W. T. Henleys Telegraph Works Co., Ltd., 407
Resistivity Test Set, Portable Metal Sorter, Solartron Electronic Group Ltd., 188
Restrictive Practices, 810
Trade Practice Act, 1956, 32
Retrospect, (Leading Article, 1)
Returns, Wreck, Lloyd's Register of Shipping, (236), (564)
Reversing Gear, D. Guthrie, (Letter, 608) ; P. Wilson, (Letter, 799)
Revs, Low,—High M.E.P., (Leading Article, 512)
Rhodesia Railways, Beyer-Garratt Locomotives for, Beyer Peacock and Co., Ltd., 669
Richmond-San Rafael Bridge, California, (Plate 15, 11.1.57)
Rider Controlled Electric Fork Truck, Lansing-Bagnall Ltd., (468)
Rilem Symposimn on Winter Concreting, (Review, 955)
Ring Road, Birmingham Inner, 395
Rings, Piston, and Commutator Brushes, Hydrodynamic Lubrication, W. Lewicki, 84, 122
River, Hudson, New York, "Thruway" or Tappan Zee Bridge, (Plate 15, 11.1.57)
Lower Fraser, Vancouver, Road Tunnel Under, 48
Project, Volta, 20
Severn and Gloucester and Sharpness Canal, Improvements, (807)
Steel Arch across the Volta, (Plate 2, 4.1.57)
Trent Navigation, Improvement, (508)
Rivers and Channels, Friction Formulae, J. R. D. Francis, 519
Rivets for Aircraft, Aluminium, (B.S.I., 649)

ROADS

Birmingham Inner Ring Road, 395
Britain's Road Programme, 395
British Road Services, New Regulations, 916
Chiswick Flyover, 201
Contracts for Road Schemes, 935
Cromwell Road Extension, 44
Firth of Forth Road Crossing, 257, (Leading Article, 240)
Improvement on A.5 in Staffordshire, (25)
Longton By-pass Road, 840
Low-Grade Materials for Road Construction, F. W. Ingle, 615
Lupara and Caifa Road Bridges, Italy, 582
Neath By-Pass, Second Stage, 473
New Roads and Vehicle Taxation, 438
Park Lane Improvement Scheme, 631
Preston By-pass, 20
Reconstruction of the Great North Road, (854)
Research on Injuries from Road Accidents, 43
Road Development in Nigeria, (428)
Transport, (Patent, 469, 969)
Tunnel Under Lower Fraser River, Vancouver, 48
Route of Birmingham to Preston Motorway, 593
Toll Roads in the U.S.A., H. J. H. Starks, 288, 323
Torque Converter Roller, Eddison Plant Ltd., (757)
Transport, Road, (Patent, 1005)
Trunk Road from Tema to the Volta Bridge, 20
Urban Highway Maintenance, W. J. Hiscock, 43
"What Are We To Do With Our Street Traffic?", 1857, 83

Robert Blair Fellowships in Science and Technology, (156)
Rocket Era, Ballistic, and the Navy, (Leading Article, 42)
Symposium, 945
Rockslide at Schoellkopf Power Station, 77
Rod, Ball and Tube Mills, Gear Failures, H. E. Rose, 522
Rods and Cables, Portable Hydraulic Shear, Copelaw Engineering Co., Ltd., 496
Role of the Drawing Office, (Leading Article, 629)
Roll Doors, Steel, Golmet Ltd., (188)
Rolled Steel Railway Wheels, Solid, (B.S.I., 67)
Roller, Torque Converter, Eddison Plant Ltd., (757)
Rolling Mill and Heavy Press Installations in America, (Plate 16, 11.1.57)
Ultra-Thin Strip, Twenty-High Cluster Mill, Loma Machine Manufacturing Co., 351
Rolls, Tilting Turning, for Welding Cylindrical Work, Donald Ross and Partners Ltd., 110
Roof, Aluminium Grandstand, Johannesburg, 579
Construction, Symposium on Shell, (428)
Control, Mine, Hydraulic Dynamometer, Dowty Group Ltd., (930)
Coverings, Fire Hazards of, N. C. Strother Smith, (Letter, 836)
Supports, Self-Advancing, for Mechanised Coal Mines, Dowty, 995
Room, Portable Cold Storage, Penfold and Partners, (499)
Rope Traction—Steam Culture, 1857, 513
Rope's End, A, 1857, 120
Rotary Drill, Atlas Copco (Great Britain) Ltd., 656
and Inclinable Optical Indexing Table, Optical Measuring Tools Ltd., (209)
Milling Machine, Dowding and Doll Ltd., 269
Pumps, Easily Cleaned, Plenty and Son, Ltd., (413)
Rotor Tip Pressure Jets, Fairey Aviation Co., Ltd., 686
Route of Birmingham to Preston Motorway, 593
"Routemaster" Bus, (428)
"Roving Eye" Television Equipment, 412
Royal Aeronautical Society, Advanced Aeronautical Education, (428), 488 ; The Fairey "Delta 2", R. L. Lickley and L. P. Twiss, 297 ; Lanchester Memorial Lecture, 745 ; Rocket Symposium, 945 ; Transonic Tunnel Testing Technique, 69
Agricultural Society, Ditch Cleaning Machines, 763
Navy, Teaching Device, 413
Ordnance Factories, 189, 745
Society of Arts, Benjamin Franklin Medal, 121
Rubber, Chemical and Plastics Exhibition, Paris, 190
Engineering Uses, A. T. McPherson and Alexander Klemin, (Review, 683)
Mouldings, Precision Mechanical, Reliance Rubber Co., Ltd., (276)
Pressing Refinement, Short Brothers and Harland Ltd., 380
Plant, Synthetic, Dunlop Rubber Co., Ltd., 221
Testing Vulcanised, (B.S.I., 837)
Rule, Slide, For Hydraulic Calculations, 135
Rules and Regulations for the Construction and Classification of Steel Ships, (Review, 409)
Runways, Prestressed Concrete, 319
Rupturing of a Wide Plate, Conditions for Unstable, G. M. Boyd, 644
Russia, Engineering Education in, 340
Russian, British and Continental Engineering Education, A Comparison, C. Jaeger, B. L. Goodlet and A. L. L. Baker, 203, 242
Coal Industry, 445
Destroyer "Tallinn", 92
Education for Engineers, (Leading Article, 317)
Frigate "Riga", 92
Water Power, (Leading Article, 820); 849
Rust Protection of Steel Chimneys, Southern Metalife Ltd., (468)

S

Saar, Steel Production, 192
Safeguard Control, Combustion, Pearl Controls Ltd., 107
Safety Competition, 888
Devices for Agricultural Machinery, F. Lee, 405
in Mines Research Establishment Laboratory, 731
in Non-Ferrous Foundries, 996
Slings, Protective, Cable Covers Ltd., (374)
Salaries and Wages in Switzerland, 545
Salon Internationale de l'Aeronautique, 884, 923
Salt Production at Whyalla, South Australia, 382
Salvaging of the "Empress of Canada", W. R. Colbeck, 128, 162
Sampling Manifold, Gas, at Calder Hall, Richard Klinger, Ltd., 219
Techniques, Work, in Work Study, J. A. C. Williams, 245
San Niccolo Bridge, Florence, 583
Sands and Powders, Hydraulic Separators for Grading, Millars Machinery Co., Ltd., 187
Saw Butt Welder, Band, Elektro-Apparate-Bau G.m.b.H., 851
Sawmill for Canada, Portable, Stenners of Tiverton Ltd., 575
Scaffolding Cradles and Bosuns' Chairs, Winch for, Tirfor Ltd., 769
Scale Removal Compound, Walterisation Co., Ltd., (968)
Scales, Boxwood, Architects', Engineers' and Surveyors, (B.S.I., 369)
Scatter Link, Tropospheric, Marconi's Wireless Telegraph Co., Ltd., 59
Schoellkopf Power Station, Rockslide, 77
Scholarship, Open University, Lockheed Hydraulic Brake Co., Ltd., (236)
Structural Aluminium Research, (196)
Scholarships, Agricultural Engineering, (314)
Faraday House Old Students' Association, (740)
Institution of Naval Architects, (276)
School of Applied Dynamics, Post-Graduate, 957
Railway Apprentice Training, London, Midland Region, (559)
Schools, Science in, (Leading Article, 744)
Schwingungen, Messung Mechanischer, (Review, 649)
Science and Art of Protective Relaying, C. Russell Mason, (Review, 569)
and Arts Course, Cambridge, (Leading Article, 972)
Museum, Centenary, (Leading Article, 971)
Museum and Culture, (Leading Article, 471) ; I.E.C. Delegate, (Letter, 722)
Museum, Electric Power Gallery, 783
Research in Nuclear, (Leading Article, 318)
in Schools, (Leading Article, 744)
or Service?, (Leading Article, 41)
and Technology, National Lending Library, D. J. Urquhart, 90 ; Gordon H. Wright, (Letter, 174)
and Technology, Robert Blair Fellowships, (156)
Scientific Instruments, Fifty-Fourth Exhibition of French, 924
Instruments Manufacturers Association, Display, (196)
Investigation of the Upper Atmosphere, 342
Research in British Universities, 1955-56, (Review, 215)
Scope for Operational Research in Industry, Stafford Beer, 434, 479
Scotland's First Nuclear Power Station, 216, 260
Scottish Industry, 229
Water Power Development, 367
Scrap Consumption, Ferrous, in West Germany, 348
Screw Conveyor, Portable and Extendable, Opancol Ltd., (508)
Slotting Machine, Automation Ltd., 882
Thread Practice, Unification of, D. G. Sopwith and J. E. Field, 793
Threads, Parallel, of Whitworth Form, (B.S.I., 609)
Sea Trials on the "Lubumbashi", Further, G. Aertssen, 602
Seal, Mechanical Shaft, for Corrosive Services, Crane Packing Ltd., (86)
Sealed Quench Furnace, Birlec Ltd., 107
Seals, Hard Metal-Faced Mechanical, Crane Packing Ltd., (732)
Seam-Welded Aluminium Tubing, T. I. Aluminium Ltd., 268
Seaweeds, Brown Sub-littoral, Harvesting Machinery for, Philip Jackson, 400
Seat, Glass Fibre Aircraft, Microcell Ltd., (719)
Secondary Treatment Plant at the L.C.C.'s Northern Outfall, Construction, 610
Sections, Extruded, Stretching and Detwisting Machine, Fielding and Platt Ltd., 958
Sedimentology Laboratory, Shell Petroleum Co., Ltd., (236)
Seeing by Radio, (Leading Article, 592)
Selection, Datum, in the Drawing-Office, L. P. Wakefield, 675
Electric Gear, 106
Self-Advancing Roof Supports for Mechanised Coal Mines, Dowty, 995
Self-erecting Climbing Crane, Abelson and Co., (Engineers) Ltd., 225
Climbing Crane, Leslie and Co., Ltd., 805
Self-Propelled Combine Harvester, Ransomes, Sims and Jefferies Ltd., (Plate 8, 11.1.57)
Self-Proportioning Oil Burner, Premier Oil Burners, 380
Selling Overseas, 111
Sensitive Altimeters for Aircraft, (B.S.I., 444)
Separation, Magnetic, Electromagnets Ltd., (878)
Process, Heavy Water, 503
Separator, Coolant, Rapid Magnetic Machines Ltd., 881
Separators, Hydraulic, for Grading Sands and Powders, Millars' Machinery Co., Ltd., 187
Servants, Strike of Omnibus, 1857, 745

Service, Manufacturers' Advisory, 111
or Science ? (Leading Article, 41)
Services, Corrosive, Mechanical Shaft Seal for, Crane Packing Ltd., (86)
Estimates for the Fighting, (Leading Article, 743)
Servicing Power Station Equipments, Mobile Workshops, British Thomason-Houston Co., Ltd., 580
Sets, Diesel Alternator, Metropolitan Water Board, (Plate 5, 4.1.57)
Setting, Co-ordinate, Newall Group Sales Ltd., (930)
Severn and Gloucester and Sharpness Canal, Improvements for River, (807)
Tunnel Pumping Stations, Electrification, 319
Sewage and Sewage Effluents, Methods of Chemical Analysis as Applied to, (Review, 255)
Treatment Works, Deephams, Edmonton, (Plate 1, 11.1.57)
Shaft Seal, Mechanical, for Corrosive Services, Crane Packing Ltd., (86)
Shaping Radioactive Materials, Hydraulic Press for, Loewy-Hydropress Division, 777
Sharpness and Gloucester Canal, Improvements for River Severn and, (807)
Shear, Automatic Billet, Lamberton and Co., Ltd., 259
for Rods and Cables, Portable Hydraulic, Copelaw Engineering Co., Ltd., 496
Sheet Wax, Uniform, Kindt-Collins Co., 882
Shell Construction, Projection Planetarium, Walther Bauersfeld, 755, 796
Moulding Machine, Fairbairn Lawson Combe Barbour Ltd., 107
Roof Construction, Symposium, (428)
Shells, Circular Cylindrical, Distribution Method for, J. C. de C. Henderson and E. Kemp, 634
Shelving, Metal, Savage and Parsons Ltd., (1004)

SHIPS AND SHIPBUILDING

Aircraft Direction Frigate H.M.S. "Salisbury", 29
Aluminium Alloy Fishing Boat, Brooke Marine Ltd., 345
Anti-aircraft Frigate "Lynx", 29
Frigate "Puma", 29
Anti-submarine Frigate "Dundas", 29
Frigate "Torquay, 29
Frigate, "Whitby", 29
Position To-Day, (Leading Article, 706)
Atomic-Powered Tankers, (Leading Article, 432)
Attack Aircraft Carrier U.S.S. "Saratoga", 65
Automatic Pilot, Decca Navigator Company Ltd., 378
Ballistic Rocket Era and the Navy, (Leading Article, 42)
"Bluebird" Hydroplane, (Plate 12, 11.1.57)
British Shipbuilding Compendium, 1957, (Review, 683)
Bulk Sugar Carrier "Crystal Gem", 94
Canadian Pacific Liner "Empress of Britain", Fairfield Shipbuilding and Engineering Co., Ltd., (Plate 9, 4.1.57)
Cargo Liner "Capetan Cardamilitis", Burntisland Shipbuilding Co., Ltd., 60
Liner, "City of Colombo", Barclay, Curle and Co., Ltd., 60
Liner, "Diomed", Caledon Shipbuilding and Engineering Co., Ltd., 60
Liner "Michael C", 94
Liner "Nyanza", Scotts' Shipbuilding and Engineering Co., Ltd., 23
and Passenger Liner "Argylishire", Greenock Dockyard Co., Ltd., (Plate 10, 4.1.57)
Passenger Liner "Clan Ross", Greenock Dockyard Co., Ltd., 23
Passenger Liner "Norman Prince", Burntisland Shipbuilding Co., Ltd., (Plate 10, 4.1.57)
Ship "Kaituna", Alexander Stephen and Sons, Ltd., (Plate 10, 4.1.57)
Ship "Oti", Harland and Wolff Ltd., (Plate 10, 4.1.57)
Civil Engineering Contributions to Shipbuilding, 513
Coastal Cargo Ship "Burwah", Burntisland Shipbuilding Co., Ltd., (Plate 10, 4.1.57)
Conditions for Unstable Rupturing of a Wide Plate, G. M. Boyd, 644
Cunard Liner "Carinthia", John Brown and Co. (Clydebank) Ltd., (Plate 9, 4.1.57)
"Cutty Sark" Opening Ceremony, 973
Destroyer, U.S.S. "John Paul Jones", 65
Diesel-Electric Paddle Tugs for the Navy, G. W. Tripp, 486
Directory of Shipowners, Shipbuilders and Marine Engineers, 1957, (Review, 799)
Education and Training of Naval Architects and Marine Engineers, 253
Effect of Cavitation in the Performance of a Series of 16in. Model Propellers, R. W. L. Gawn and L. C. Burrill, 558
of Superstructures on the Longitudinal Strength of Ships, J. B. Caldwell, 604
Engineering, Marine, Welding and Nuclear Energy Exhibition, (156)
and Shipbuilding Wages, 399, 770, 848
Engines at the National Boat Show, 102
Experience of an Ore Carrier Built Abroad, R. Atkinson, (664)
Experimental Submarine "Explorer", 30
Ferry Boat "Gripen", Aalborg Vaerft A/S, (Plate 13, 4.1.57)
French Nuclear Marine Propulsion, 660
Shipbuilding in 1956, 310
Submarine "Narval", 92
Further Sea Trials on the "Lubumbashi", G. Aertssen, 602
Grab Hopper Dredger "Samuel Armstrong", Henry Robb Ltd., (Plate 11, 11.1.57)
Guided Missile Trial Ship H.M.S. "Girdle Ness", 30
Handbuch der Werften, 1956, (Review, 409)
High-Speed Small Craft, Peter Du Cane, (Review, 409)
H.M. Submarine "Explorer", 499
Holland America Liner "Statendam", Wilton-Fijenoord N.V., 886
How's Ship Pump and Fire Engine, 1857, 630
Hydroplane "Bluebird", L. H. Norris and K. W. Norris, 474 (and Suppt.)
Interaction between a Ship's Hull and a Long Superstructure, J. C. Chapman, 604
Japanese Destroyer Escort, "Akebono", 92
Destroyer "Harukaze", 92
Launches and Trial Trips, 80, 118, 158, 198, 430, 470, (549), 590, 628, 666, 704, 742, 780, 818, 856, 894, 970
Lightship "Flame", 96
Liner "Reina del Mar", Harland and Wolff Ltd., (Plate 9, 4.1.57)
Lloyd's Register of Shipping, Shipbuilding Returns, 149, 634 ; Wreck Returns, (236), (564)
Marine Electrical Installations, A. N. Savage, (619)
Engineering, (Patents, 469, 509, 627, 703)
Equipment Exhibition, Carron Company, (382)
Machinery Breakdowns, J. H. Milton, (664)
Maritime Structures, Two, 801
Microwave Course Beacon, 378
Minelayer and Looplayer H.M.C.S. "Blue Throat", 65
Model Experiments on a Series of 0.70 Block Coefficient Forms, R. E. Blackwell, G. L. Goodrich and D. J. Doust, 602
Motor Ship "Scottish Coast", G. W. Tripp, 403
Vessel "Essex Ferry", G. W. Tripp, 171
National Boat Show, 4
Physical Laboratory New Ship Hydrodynamics Laboratory, J. F. Allan, 557
Naval Construction in 1956, 29, 65, 92
Nuclear Propulsion, 281
Netherlands Destroyer, "Friesland, 92
Nowegian America Liner "Bergensfjord", Swan, Hunter and Wigham Richardson Ltd., 23
Nuclear Machinery for Submarine, Vickers Nuclear Engineering Ltd., (390)
Propulsion of Merchant Ships, 4
Ocean Iron Ore Carriers—Design Considerations, James Lenaghan, 524
Oil Tanker, "Caltex Edinburgh", Scott's Shipbuilding and Engineering Co., Ltd., (Plate 10, 11.1.57)
Tanker, "George F. Getty", 545
Tanker "San Felipe", Smith's Dock Co., Ltd., (Plate 10, 11.1.57)
Tanker "Solfonn', 95
Tanker "Spyros Niarchos", Vickers-Armstrongs (Shipbuilders) Ltd., (Plate 10, 11.1.57) ; Film, (221)
Tanker "Vivien Louise", 95
Tanker "Vola", 95
On the Shipbuilding Strike, 441
Ore Carrier "Ruth Lake", 96
Oxygen-Cutting Equipment for Ship's Deck Beams, British Oxygen Gases Ltd., 253
Passenger and Cargo Building at Southampton, (Plate 2, 4.1.57)
and Cargo Ship "Scillonian", John I. Thornycroft, (Plate 11, 11.1.57)
Launch, High-speed, John I. Thornycroft and Co., Ltd., 224
Ship "Duke of Lancaster", Harland and Wolff Ltd., (Plate 11, 11.1.57)
Reactor Contract for Nuclear Powered Merchant Ship, 891
Regenerative Cycle Two-shaft Gas Turbine Propulsion Unit, General Electric Company, (Plate 5, 4.1.57)
Royal Navy in 1956, 12, 49
Rules and Regulations for the Construction and Classification of Steel Ships, (Review, 409)
Russian Destroyer "Tallinn", 92
Frigate "Riga", 92
Salvaging of the "Empress of Canada", W. R. Colbeck, 128, 162
Ship and Boat Builder Annual Review, 1957, (683)
Hull Pressure Measurements, N. Hogben, 645
Model Experimental Tank, 145
Vibration, A. J. Johnson and P. W. Ayling, (664)
Shipbuilding Challenge, (Leading Article, 394)
Conference Statistics, (252)
and Engineering Disputes, 462
and Engineering Wage Dispute 500
and Engineering Wages, 542
and Marine Engineering in 1956, 23, 60, 94
Statistics, (731)
Steel for Shipbuilding, 462
Stresses in Deckhouses and Superstructures, A. J. Johnson, 604
Structural Steels for Warship Building with Some Notes on Brittle Fracture, Sir Victor Shepheard, 526
Submarine "Explorer", 49
Operations, 1857, 896
U.S.S. "Sea Wolf", Atomic Powered, 65
Supermarine N.113, Fleet Fighter, (156)
Tanker, Construction of 100,000-ton, 349
"Horomya", 95
Teaching Device for the Royal Navy, 413
Training of Naval Architects, (Leading Article, 280)
Trawler "Pioneer", Brooke Marine Ltd., (Plate 11, 11.1.57)
Troopship "Nevasa", Barclay, Curle and Co., Ltd., 23
Twin Screw Tug "Atherfield", John I. Thornycroft and Co., Ltd., (Plate 11, 11.1.57)
Screw Tug "Otago', 96
Screw Tug "Takoradi", 96
United States Heavy Cruiser "Canberra"' 30
Unpainted Aluminium Alloy Ship Superstructure, Davie Shipbuilding Ltd., 307
Use and Welding of Aluminium in Shipbuilding, (Review, 485)
Venezuelan Destroyer "Aragua", 92
Destroyer "Juan Jose Flores", 92
Voyage Data, R. E. Clements, (173)
Wages, Engineering and Shipbuilding, 733
Shipbuilding, 916
Welded Aluminium Deep Tank Hatch Cover, Head Wrightson Aluminium Ltd., 379
World's Tankers, Laurence Dunn, (Review, 529)

Named Vessels

"Akebono" Japanese Destroyer Escort, 92
"Aragua", Venezuelan Destroyer, 92
"Argylishire" Cargo and Passenger Liner, Greenock Dockyard Co., Ltd., (Plate 10, 4.1.57
"Atherfield", Twin Screw Tug, John I. Thornycroft and Co., Ltd., (Plate 11, 11.1.57
"Bergensfjord", Norwegian America Liner, Swan, Hunter and Wigham Richardson Ltd., 23
"Blue Throat", H.M.C.S. Minelayer and Looplayer, 65
"Burwah" Coastal Cargo Ship, Burntisland Shipbuilding Co., Ltd., (Plate 10, 4.1.57)
"Caltex Edinburgh" Oil Tanker, Scott's Shipbuilding and Engineering Co., Ltd., (Plate 10, 11.1.57)
"Canberra", United States Heavy Cruiser, 30
"Capetan Cardamilitis", Cargo Liner, Burntisland Shipbuilding Co., Ltd., 60
"Carinthia", Cunard Liner, John Brown and Co. (Clydebank) Ltd., (Plate 9, 4.1.57)
"City of Colombo", Cargo Liner, Barclay, Curle and Co., Ltd., 60
"Clan Ross" Cargo-passenger Liner, Greenock Dockyard Co., Ltd., 23
"Crystal Gem", Bulk Sugar Carrier, 94
"Cutty Sark" Opening Ceremony, 973
"Diomed", Cargo Liner, Caledon Shipbuilding and Engineering Co., Ltd., 60
"Duke of Lancaster" Passenger Ship, Harland and Wolff Ltd., (Plate 11, 11.1.57)
"Dundas", Anti-submarine Frigate, 29
"Empress of Britain" Canadian Pacific Liner, Fairfield Shipbuilding and Engineering Co., Ltd., (Plate 9, 4.1.57)
"Empress of Canada", Salvaging, W. R. Colbeck, 128, 162
"Essex Ferry", Motor Vessel, G. W. Tripp, 171
"Explorer", Experimental Submarine, 30
"Explorer", H.M. Submarine, 499
"Flame", Lightship, 96
"Friesland", Netherlands Destroyer, 92
"George F. Getty", Large Oil Tanker, 545
"Girdle Ness", H.M.S., Guided Missile Trial Ship, 30
"Gripen" Ferry Boat, Aalborg Vaerft A/S, (Plate 13, 4.1.57)
"Gripsholm", Swedish American Liner, Societe Ansaldo, 963
"Harukaze", Japanese Destroyer, 92
"Horomya", Tanker, 95
"John Paul Jones", U.S.S. Destroyer, 65
"Juan Jose Flores", Venezuelan Destroyer, 92
"Kaituna" Cargo Ship, Alexander Stephen and Sons, Ltd., (Plate 10, 4.1.57)
"Lubumbashi", Further Sea Trials, G. Aertssen, 602
"Lynx", Anti-aircraft Frigate, 29
"Michael C", Cargo Liner, 94
"Narval", French Submarine, 92
"Nevasa", Troopship, Barclay, Curle and Co., Ltd., 23
"Norman Prince", Cargo Passenger Liner, Burntisland Shipbuilding Co., Ltd., (Plate 10, 4.1.57)
"Nyanza" Cargo Liner, Scotts' Shipbuilding and Engineering Co., Ltd., 23
"Otago", Twin Screw Tug, 97
"Oti" Cargo Ship, Harland and Wolff Ltd., (Plate 10, 4.1.57)
"Pioner" Trawler, Brooke Marine Ltd., (Plate 11, 11.1.57)
"Puma", Anti-aircraft Frigate, 29
"Reina del Mar", Liner, Harland and Wolff, Ltd., (Plate 9, 4.1.57)
"Riga", Russian Frigate, 92
"Ruth Lake", Ore Carrier, 96
"Salisbury", H.M.S., Aircraft Direction Frigate, 29
"Samuel Armstrong" Grab Hopper Dredger, Henry Robb Ltd., (Plate 11, 11.1.57)
"San Felipe" Oil Tanker, Smith's Dock Co., Ltd., (Plate 10, 11.1.57)
"Saratoga", U.S.S. Attack Aircraft Carrier, 65
"Scillonian" Passenger and Cargo Ship, John I. Thornycroft and Co., Ltd., (Plate 11, 11.1.57)
"Scottish Coast", Motor Ship, G. W. Tripp, 403
"Sea Wolf", U.S.S. Atomic Powered Submarine, 65
"Solfonn", Oil Tanker, 95
"Spyros Niarchos", Oil Tanker, Vickers-Armstrongs (Shipbuilders) Ltd., (Plate 10, 11.1.57) ; Film, (221)
"Statendam", Holland America Liner, Wilton-Fijenoord N.V., 886
"Takoradi", Twin Screw Tug, 96
"Tallinn", Russian Destroyer, 92
"Torquay", Anti-submarine Frigate, 29
"Vivien Louise", Oil Tanker, 95
"Vola", Oil Tanker, 95
"Whitby", Anti-submarine Frigate, 29

Naval Matters

Aircraft Direction Frigate H.M.S. "Salisbury", 29
Anti-aircraft Frigate "Lynx", 29
Frigate "Puma", 29
Anti-submarine Frigate "Dundas", 29
Frigate "Torquay", 29
Frigate "Whitby", 29
Anti-Submarine Position To-day, (Leading Article, 706)
Atomic-Powered Tankers, (Leading Article, 432)
Ballistic Rocket Era and the Navy, (Leading Article, 42)
Closed-Cycle Air Turbine for Naval Use, W. Spillman, 995
de Havilland "Sea Vixen" Naval Interceptor, (508)
Diesel-Electric Paddle Tugs for the Navy, G. W. Tripp, 486
Experimental Submarine "Explorer", 30
Fairey "Gannet" Anti-submarine Aircraft, 49
French Ocean-going Submarine "Narval" 92
Grumman "Tiger" Carrier-borne Fighter 16
Guided Missiles Trial Ship H.M.S. "Girdle Ness" 30
H.M.C.S. "Blue Throat" Minelayer and Looplayer, 65
H.M. Submarine "Explorer", 499
Japanese Destroyer Escort "Akebono", 92
Destroyer "Harukaze", 92
Naval Construction in 1956, 29, 65, 92, (196)
Nuclear Propulsion, 281
Netherlands Destroyer "Friesland", 92
Nuclear Machinery for Submarine, Vickers Nuclear Engineering Ltd., (390)
Royal Navy in 1956, 12, 49
Russian Destroyer "Tallinn", 92
Frigate "Riga", 92
Structural Steels for Warship Building with some Notes on Brittle Fracture, Sir Victor Shepheard, 526
Submarine "Explorer", 49
Supermarine N.113, Fleet Fighter, (156)
Teaching Device for the Royal Navy, 413
Troopship "Nevasa", Barclay, Curle and Co., Ltd., 23
United States Heavy Cruiser "Canberra", 30
U.S.S. Atomic Powered Submarine "Sea Wolf", 65
Destroyer "John Paul Jones", 65
"Saratoga" Attack Aircraft Carrier, 65
Venezuelan Destroyer "Aragua", 92
Destroyer "Juan Jose Flores", 92

Shop Under Construction, Press, Briggs Motor Bodies Ltd., 650
Shopmen's Pay Claim, Railway, 733
Shoreham Harbour Reconstruction, (Plate 11, 4.1.57)
Short Duration Arcs, Oscillographic Observation, (Report, 1006)
Time Working and Unemployment, 189
Shortage of Engineers in America, 75
Steel, The Building Frame, A. L. L. Baker, 286
Shovel, Mobile Loading, F. E. Weatherill Ltd., 915
Quarry, Menck and Hambrock G.m.b.H., 505
Show, American National Automobile, 193
National Boat, 4
National Boat, Engines, 102
"Shunters, Brewery", The Last, (38)
Shunting Locomotive, Diesel, for the Swedish State Railways, 272
Locomotive, Diesel-Mechanical, Ruston and Hornsby Ltd., 419
Signalling Installation at Cowlairs, Colour-Light, 454
Signs, Reflective, (314)
Silting in the Thames Estuary, 859
Silver, Electroplated Coatings, (B.S.I., 876)
Silverwood Colliery, D.C. Winder with Control Exciter, General Electric Co., Ltd., 182
Sinking Winders at Lea Hall Colliery, Automatic Control for 1,200-h.p., 55
Size Analysis, Improved Methods of Particle, T. H. Hughes, 860
of Manufacturing Establishments, 32
Skelp Mill at Newcastle, N.S.W., 537
Skies, Open for Peace Exhibition, 43
Skilled Workmen, 1857, 357
Workmen, Dearth of, 1857, 201
Skip Winder, 3,000-h.p. at Cwm Colliery, 55
Slab Railway Overbridge, Flat, 915
Slag and Masonry Cement, Africa, 383
Slagging Boiler, Continuous, for Padiham Power Station, Simon-Carves Ltd., (626)
Sleepers, Railway, Spacing on South African Railways, 227
Sleet Tenders on London Transport, 226
Slide Rule for Hydraulic Calculations, 135
Slightly Oiled, (Leading Article, 159)
Slings, Protective Safety, Cable Covers Ltd., (374)
Slot Design, Contribution Towards Rational Tee, H. Fessler, 904
Slotting Machine, Screw, Automation Ltd., 882
Slugs, Precipitator Unit for Detecting Burst, Plessey Nucleonics Ltd., 58
Small, Dr. William, A. K. Bruce, 362
Small Manufacturers, Loan Facilities, 150
Smoke Abatement and Grit Arrester Equipment, Meldrum, Flood Page Ltd., 148
Indicator and Alarm Unit, Lancashire Dynamo Electronic Products Ltd., 726
upon Railways, Consumption, 1857, 42
Smoley's Four Combined Tables, (Review, 409)
Social Progress and Automation, S. Lilley, (Review, 759)
Society of Chemical Industry, Symposium on Corrosion of Metals in Buildings, (71)
Sodium Graphite Reactor Electric Power Plants, 424
Reactor Experiment Begins Operation, U.S., 967
Softwoods, Working Stresses for Structural, (Report, 339)
Soil Engineering in Frost Areas, (701)
Mechanics, International Conference, 110
Stabilisation at Southend Airport, 631
Testing Manual, (547)
Soldering and Drilling Applications, Ultrasonic Generator for, Mullard Ltd., 228
Stainless Steel, Perdeck Soldering Products Ltd., (892)
Solenoid-Operated Valves, Large Capacity, Teddington Industrial Equipment Ltd., (532)
Solid Rolled Steel Railway Wheels, (B.S.I., 67)
State Oscillator for Microwave Frequencies, Bell Telephone Laboratories, 389
Wheel and Disc Mill, Schloemann A.G., 347
Solids, Determination of Moisture in, (Report, 302)
Soluble Wax Cores for Investment Casting, Firth Vickers Stainless Steels Ltd., 578
Solvent Extraction Plants, Iwel Ltd., 459
Sorter, Portable Metal, and Resistivity Test Set, Solartron Electronic Group Ltd., 188
Sorting Equipment for the Post Office, Mechanised, 688
Sound, Technical Aspects, E. G. Richardson, (Review, 683)

South-Africa, Railway Works, 919
Storms River Bridge, 583
Trade with, 500
South African Railways, Spacing of Sleepers, 227
South Australia, Salt Production at Whyalla, 382
Southampton, Passenger and Cargo Building, (Plate 2, 4.1.57)
Southend Airport, Soil Stabilisation, 631
(Victoria) Line, Electrification, 4, 68
Soviet Trade, Anglo-, 620
Union, Engineering Education, 340
Spacing of Railway Sleepers on South African Railways, 227
Spannbetonbau, (Report, 447)
Spares Storage and Handling, Ford Motor Company, 653
Species, Origin of, Churchward's Locomotives ? E. C. Poultney, 944
Specification and Management of Materials in Industry, C. H. Starr, (Review, 608)
Standards, Steamlined, Vol. II, Electrical and Mechanical, (Review, 409)
Specimens Containing Preformed Fatigue Cracks, Fatigue Strength, N. E. Frost, 864
Spectrograph, Vacuum, Laboratories Bellevue, 924
Speed Controller, Electronic, Crompton Parkinson Ltd., 766
Drive, Variable, Lancashire Dynamo Electronic Products Ltd., 726
Economics of, Lord Douglas of Kirtleside, 291
Higher, Diesel Engines, Rover Co., Ltd., 911
Record, Air, C. H. Chichester Smith, (Letter, 174)
Spekker Photoelectric Absorptiometer, Metallurgical Analysis by Means of, F. W. Hayward and A. A. R. Wood, (Review, 369)
Spherical Particles in Pipes, Flow of Suspensions of Non-Cohesive, H. E. Rose and H. E. Barnacle, 898, 939
Spheroidal or Nodular Graphite, Iron Castings with, (B.S.I., 369)
Spinning Discs, Atomisation of Water by, J. R. Pattison and J. D. Aldridge, 514
Sponsorship Schemes in Remploy Factories, Remploy Ltd., 303
Spray Booth Exhaust Fan Control Device, Alfred Bullows and Sons, Ltd., 110
Sprayers and Burners, (Patents, 589, 932, 1005)
Sprectrometer, Mass, Metropolitan-Vickers Electrical Co., Ltd., (Plate 7, 11.1.57)
Squirrel-Cage Motors with Class-E Insulation, Ventilated, English Electric Co., Ltd., 306
Motors, Crompton Parkinson Ltd., 571
Motors, Drip-proof, with Class-E Insulation, Newman Industries Ltd., 343
Stabilisation, Soil, at Southend Airport, 631
Stabiliser, Voltage, Philips Electrical Ltd., 571
Stabilite Dynamique des Reseaux Interconnectes, Sur La, (Report, 134)
Stability, Cost, 770
Price and Productivity, 883
Staffordshire, Improvement on A.5 Trunk Road, (25)
"Stahl und Eisen", Anniversary, (78)
Stainless Steel Soldering, Perdeck Solder Products Ltd., (892)
Stand, Drawing, M.B.C. (Office Systems) Ltd., 915
High-Head Turbine Test, American, 153
Standard A.C. Motors, Improved Range, Crompton Parkinson Ltd., 109
Class 5 Mixed Traffic Locomotive, (Plate 7, 4.1.57)
Range of Generating Sets, Newage (Manchester) Ltd., 538
Standardising Base, Changes in a 50m Mural Tape, L. O. C. Johnson, 632
Standards Conference, Commonwealth, 433
Officers' Conference, 783
for Punched Cards, 450
Streamlined Specification, Vol. II, Electrical and Mechanical, (Review, 409)
Standby Power Supply, "No-Break" Alternator Set for, Lister-Blackstone, 912
Stanlow Refinery Developments, Shell Petroleum Co., Ltd., 728
Start-Stop Time of a Geared System, J. R. Ellis, 902
Starter, A.C. Combination, Square D, Ltd., 570
Starters and Controllers, Motor, (B.S.I., 766)
Starting Aid, Engine, Power Frequency Heating Ltd., 847
Static Control Systems, "Magistor", Metropolitan-Vickers Electrical Co., Ltd., 534
Station, Berkeley Nuclear Power, 143 ; Progress, 991
Bradwell Nuclear Power, Inauguration of Work, 121
Calder Hall Nuclear Power, (Plate 1, 4.1.57)
Calder Hall Power, Welding, Gordon Brown, (Letter, 300)
Castle Donington Power, (Plate 2, 4.1.57)
Eddystone Steam Power, 736, 774
Extensions, Plymouth "B" Power, (97)
15MW Nuclear Power, for West Germany, Mitchell Engineering Ltd., 575
Gas Turbine Power, Venezuela, Ruston and Hornsby Ltd., 618
Gersteinwerk Power, at Stockum, (Plate 12, 4.1.57)
Marchwood Power, 908
Padiham "B" Power, (968)
Padiham Power, Continuous Slagging Boiler for, Simon-Carves Ltd., (626)
Power, Berkeley Nuclear, 650
Power, Kuibyshev Hydro-Electric, 421, 463
Power, Mobile Workshops for Servicing Equipment, British Thomson-Houston Co., Ltd., 580
Power, Operating Experience at Calder Hall, 241
Power, Tilbury "A", (Plate 8, 4.1.57)
Power, at Williamson Diamond Mines, 373
Railway : An Architectural History, Carroll L. V. Meeks, (Review, 987)
Scotland's First Nuclear Power, 216, 260
Testing, for Tall Structures, Stewarts and Lloyds Ltd., (Plate 6, 11.1.57)
at Thorpe Marsh, Proposed Coal-Burning Power, 809
Willington "B" Power, 200MW Turbo-Generators Metropolitan-Vickers Electrical Co., Ltd., 173
Stations, C.E.A. Power, Efficiencies, 580
C.E.A. Power, Generating Plant Installed in 1956, 70
Floating, for Nuclear Power Plants, F. H. E. Myers, (Letter, 214) ; A. P. Mason, (Letter, 338)
Power, Hams Hall, (Plate 8, 4.1.57)
Pumping, Electrification of the Severn Tunnel, 319
Statistical Methods in Research and Production, O. L. Davies, (Review, 799)
Statistics for Europe, Electric Energy, (Report, 224)
Metal, 1946-1955, (Report, 256)
Shipbuilding Conference, (252)
Shipbuilding, 731
Stator Windings for Large Alternators, Direct-Water-Cooled, General Electric Co., Ltd., 878
Status of Engineers, (Letter, 408) ; J. G. Orr, (Letter, 446)
Steam Boilers, Cylindrical Land, (B.S.I., 369)
Condenser Design, Nomogram for, J. P. Duncan, 642
Culture—Rope Traction, 1857, 513
Engine, Vertical, Mannesmann-Meer A.G., 811
Expanding from a Low Initial Quality, Supersaturation in, Denis J. Ryley, 708
Generators, (Patents, 39, 157, 589, 665, 703, 741, 855)
Locomotive Development, More, (Leading Article, 591)
Locomotive, O. S. Nock, (Review, 485)
Power Station, Eddystone, 736, 774
Turbine Design, Technical Progress, L. S. Robson, 978
Turbine, 150MW, M.A.N., 734
Turbines, (Patent, 197)
Turbo-Generator, Dedication of Historic, U.S., 349
Steamlined Specification Standards, Vol. II, Electrical and Mechanical, (Review, 409)
Steel Arch across Volta River, (Plate 2, 4.1.57)
Austenitic Chromium-Manganese, Containing Nitrogen, 337
Boilers and Sterilising Plant, (B.S.I., 723)
Born of Fire, (Review, 649)
British, (Leading Article, 667)
Castings Research Laboratory, 910
Chimneys, Rust Protection, Southern Metalife Ltd., (468)
and Coal Community, European, 698, 897
Coal and Iron in 1956, 62
Conveyors, Wharton (Engineers) Ltd., 227
Cutting Carbide Tools, (196) ; Wickman Ltd., 109
Demand, 189
Deoxidised, Effect of Sulphur in, 834
Embrittlement of Nickel-Chromium, 482
Export Policy, 72
Frame of Fourteen-storey Building, Weisbaden, Fried, Krupp Maschinen und Stahlbau Rheinhausen, (Plate 14, 11.1.57)
High-Strength, Prot Fatigue Tests on, 989
Industry, Development and Growth of Australian, 500
Industry, Problems for, Dorman Long and Co., Ltd., 32
Industry's Expansion, 657
and Iron for Colliery Cage Suspension Gear, (B.S.I., 609)
and Iron Exports, (196)
and Iron Industry, Encyclopaedia, A. K. Osborne, (Review, 837)
and Iron, Manufacture, G. R. Bashforth, (Review, 907)
and Iron Production, 308, 462, 620, 770, 959
and Iron Works, Dorman, Long and Co., Ltd., (Plate 5, 11.1.57)
and Iron Works at Workington, Workington Iron and Steel Co., 804
Links and Strap Assemblies, (B.S.I., 609)
Lock for Tie Wires, Cuno Schuckhaus K.G., 385
Plate, Articulated-, Conveyor, Richard Sutcliffe Ltd., 345
Prices, 308
Production of, Film, United Steel Companies Ltd., (664)
Production in the Saar, 192
Railway Wheels, Solid Rolled, (B.S.I., 67)
Roll Doors, Golmet Ltd., (188)
for Shipbuilding, 462
Ships, Rules and Regulations for the Construction and Classification, (Review, 409)
Shortage, The Building Frame, A. L. L. Baker, 286
Soldering, Stainless, Perdeck Solder Products Ltd., (892)
Strip, Continuous Gauging of Hot-Rolled, Baldwin Instrument Co., Ltd., 573
Strip, Flame Cutting Machine, British Oxygen Gases Ltd., (276)
Technology, Advances in 1955, (Report, 601)
Tubes and Bars, Talbot Steel Tube Co., Ltd., (993)
Wire, Oil-Hardened and Tempered, (B.S.I., 110)
Works Coking Plant in Middlesbrough, Dorman Long (Steel) Ltd., 727
Works Development, N.E. Coast, South Durham Iron and Steel Co., Ltd., 542
Works, Ebbw Vale, Richard Thomas and Baldwins Ltd., (Plate 5, 11.1.57)
Works, Rourkela, 347
Steels, Chromium-Aluminium, 835
Chromium-Manganese-Nickel Heat-Resisting, 646
Dynamic Yield Strength of, 482
High-Tensile, Reamers for, Short Brothers and Harland Ltd., 99
Impact Tests on Leaded, 647
Low-Alloy, 336
Mechanical Properties, at Elevated Temperatures, (B.S.I., 837)
Modified 12 Per Cent. Chromium, 137
Nitrides in Aluminium, 136
Slabs, Plates, Sections, Bars and Rivets, (Railway Rolling Stock), (B.S.I., 444)
Structural, for Warship Building with Some Notes on Brittle Fracture, Sir Victor Sheppheard, 526
Temper Brittleness of Boron-Treated, 835
Stepped Aluminium Alloy Extrusions in the United States, Production, 114
Sterilising Plant and Steel Boilers, (B.S.I., 723)
Stockton Works, Extensions, Ashmore Benson Pease and Co., 880
Storage and Handling, Spares, Ford Motor Company, 653
Hoppers, Anti-Bridging Device, Paterson Hughes Engineering Co., Ltd., 985
Oil, in Sweden, 348
Room, Portable Cold, Penfold and Partners, (499)
Scheme, Geesthacht Pumped, 543
Store for Table Bay, Precooling, 921
Storms River Bridge, South Africa, 583
Straightening Machine, Tube, Th. Kieserling and Albrecht, 660
Strain-Ageing, Control, 483
Strap Assemblies and Steel Links, (B.S.I., 609)
Strassenfahrzeuge mit Gasturbinenantrieb, (Report, 447)
Straw and Hay Baler, International Harvester Company of Great Britain Ltd., (Plate 8, 11.1.57)
"Street Traffic, What Are We To Do With Our"?, 1857, 83
Strength Calculations of Bolted Joints, M. Boomsma, 674
Design, Ultimate, in Reinforced Concrete, 110
of Power Transformers in Service, Mechanical, E. T. Norris, 331
of Ships, Effect of Superstructures on the Longitudinal, J. B. Caldwell, 604
of Specimens Containing Preformed Fatigue Cracks, Fatigue, N. E. Frost, 864
of Steels, Dynamic Yield, 482
Stress Corrosion Cracking and Embrittlement, W. D. Robertson, (Review, 759)
Stresses in Deckhouses and Superstructures, A. J. Johnson, 604
in Metals, X-Ray Studies, 154
for Structural Softwoods, Working, (Report, 339)
Stretched Plates, Controlled, James Booth and Co., Ltd., (252)
Stretching and Detwisting Machine for Extruded Sections, Fielding and Platt Ltd., 958
Strike of Omnibus Servants, 1857, 745
On the Shipbuilding, 441
Strikes, Comment on, 695
and the Customer, (Leading Article, 630)
On and Pending, (Leading Article, 431)
String Oscillograph, S.E.F.R.A.M., 925
Strip, Continuous Gauging of Hot-Rolled Steel, Baldwin Instrument Co., Ltd., 573
Steel, Flame Cutting Machine, British Oxygen Gases Ltd., (276)
Twenty-High Cluster Mill for Rolling Ultra-Thin, Loma Machine Manufacturing Co., 351
Stroboscope, Dawe Instruments Ltd., 494
Structural Aluminium Research Scholarship, (196)
Application of Glass-Reinforced Plastic, Mendip (Chemical Engineering) Ltd., 380
Engineering Conference, (588)
Failures, Engineering, Rolt Hammond, (Review, 649)
Softwoods, Working Stresses for, (Report, 339)
Steels for Warship Building with Some Notes on Brittle Fracture, Sir Victor Shepheard, 526
Work, Heavy Precast Concrete, 372
Structure, World, and Technology, 698
Structures, Analysis of Engineering, A. J. S. Pippard and J. F. Baker, (Review, 682)
Guided Missile, Kinetic Heating in Aircraft and, Metropolitan-Vickers Electrical Co., Ltd., 957
Maritime, Two, 801
and Metals, Fatigue, H. J. Grover, S. A. Gordon and L. R. Jackson, (Review, 101)
Recent Light Engineering, 261
Reinforced Concrete, Photographic Exhibition, 935
Testing Station for Tall, Stewarts and Lloyds Ltd., (Plate 6, 11.1.57)
Stud Welding Fasteners for Curtain Walls, 274
Students, Graduate, and Research Workers, D.S.I.R. Grants, 121
Studies of Stresses in Metals, X-Ray, 154
Study of Domestic Heating, (Report, 601)
Group, Work, Leicestershire, (532)
Tour, German, (428)
Work Sampling Techniques in Work, J. A. C. Williams, 245
Studying Technological History, (Leading Article, 896)
Sub-littoral Seaweeds, Brown, Harvesting Machinery for, Philip Jackson, 400
Submarine, Atomic Powered, U.S.S. "Sea Wolf", 65
"Explorer", 49, 499 ; Experimental, 30
"Narval", French, 92
Nuclear Machinery for, Vickers Nuclear Engineering Ltd., (390)
Operations, 1857, 896
Power Cable, 138kV, British Columbia-Vancouver Island, T. Ingledow, R. M. Fairfield, E. L. Davey, K. S. Brazier and J. N. Gibson, 678
Power Cables, 9
Subsonic Flow Past Swept Wings, (Report, 19)
"Success, Nothing Recedes Like", (Leading Article, 81)
Sudbury Nickel Ores, International Nickel Co., of Canada Ltd., (380)
Sugar Beet Harvester, John Salmon Engineering Co., Ltd., (Plate 8, 11.1.57)
Carrier, Bulk, "Crystal Gem", 94
Sulphur in Deoxidised Steel, Effect, 834
Recovery Plant, Mond Nickel Co., Ltd., (236)
Supercharged N.S.U. Motor-cycle, (Plate 12, 11.1.57)
Supersaturation in Steam Expanding from a Low Initial Quality, Denis J. Ryley, 708
Supersonic Aircraft, Bell X-2, (Plate 16, 4.1.57)
Aircraft, Chance Vought "Crusader" Swept Wing, 16
Aircraft, Convair B-58 "Hustler", (Plate 16, 4.1.57)
Aircraft, Lockheed YF-104, (Plate 16, 4.1.57)
Airliner Projected, 189
Jet Fighters, SAAB-35, (Plate 13, 4.1.57)
Wind Tunnels, Flow Direction Measurements in, (Report, 19)
Wings, Cambered, (664)
Superstructure, Unpainted Aluminium Alloy Ship, Davie Shipbuilding Ltd., 307
Superstructures, Effect of, on the Longitudinal Strength of Ships, J. B. Caldwell, 604
Supplies, World Oil, (Leading Article, 120)
Supply, Electricity, Technical Developments, 9
Hull Water, 47
Industry, Electricity, Proposals for Reorganisation, 9
"No-Break" Alternator Set for Standby Power, Lister-Blackstone, 912
Tariff, Bulk, Central Electricity Authority, 525
Supports and Bearings, (Patent, 817)
Self-Advancing Roof, for Mechanised Coal Mines, Dowty, 995
Suppression of Noise, (Patent, 353)
Surface Finish Measuring Instrument, Hommelwerke G.m.b.H., 348
Leakage Problems on High-Voltage Insulators, 387
Water Yearbook of Great Britain, 1953-54, (Review, 249) ; 1954-5, (Review, 870)
Surge Arrester, 380kV, Siemens-Schuckertwerke, 232
Generator, High-Voltage, A. Hill, (Letter 648) ; Forges et Ateliers de Construction Electriques de Jeumont, 503
Generators, Electrical Research Association, 533
Survey of the Ground Movement Problem, General, J. T. Whetton, 562
Surveying Instrument for the Precise Measurement of Length, 538
Surveyors', Architects' and Engineers' Boxwood Scales, (B.S.I., 369)
Surveys for Engineering Developments in British Columbia, (493)
Suspension Bridges, Theory of, Sir Alfred Pugsley, (Review, 447)
Gear, Iron and Steel for Colliery Cage, (B.S.I., 609)
Test Vehicle, E.R.A., (Plate 6, 11.1.57)
Suspensions of Non-Cohesive Spherical Particles in Pipes, Flow of, H. E. Rose and H. E. Barnacle, 898, 939
Sweden, Oil Storage, 348
Swedish American Liner, "Gripsholm", Societe Ansaldo, 963
Cylinder Lock, 272
State Railways, Diesel Shunting Locomotive, 272
Swept Wings, Subsonic Flow Past, (Report, 19)
Wing Supersonic Aircraft, Chance Vought "Crusader", 16
Swiss Pulpwood Consumption, 735
Switchboard, Cubicle, Brookhirst Switchgear Ltd., 535
Switchgear, A.C., J. R. Mortlock, (Review, 254)
11kV Air-break, A. R. Reyrolle and Co., Ltd., 536
Switzerland, Mountain Transport Facilities, 464
Wages and Salaries, 545
Swivel Vice or Table, Universal, Trend Industrial Equipment Ltd., 985
Symposium on Corrosion of Metals in Buildings, (71)
Rocket, 945
on Shell Roof Construction, (428)
on the Transatlantic Telephone Cable, 176
on Winter Concreting, Rilem, (Review, 955)
Synchromesh Transmission, David Brown Automobile Division, (15)
Synchronous Condenser, Large, Ateliers de Secheron, 926
Synthetic Detergents, Committee, (179)
Diamond-Like Material, "Borazon", 815
Fluids for Transformer Cooling, P. D. Wilmot and N. G. H. Thomas, 410, 451
Rubber Plant, Dunlop Rubber Co., Ltd., 222

T

Table Bay, Precooling Store, 921
Rotary and Inclinable Optical Indexing, Optical Measuring Tools, Ltd., (209)
Universal Swivel Vice or, Trend Industrial Equipment Ltd., 985
Tables, Mathematical, L. Fox, (Review, 339)
Smoley's Four Combined, (Review, 409)
Vibration Analysis, (Report, 302)
Tablet Press, Apex Construction Ltd., 994
Tabular Summary of Civil Engineering Contracts, Correction, (116)
Tactical Transport Aircraft, De Havilland Aircraft of Canada Ltd., 461
Talking the American Way, (Leading Article, 934)
Tank Hatch Cover, Deep, Welded Aluminium, Head Wrightson Aluminium Ltd., 379
Ship Model Experimental, 145
Tanker, Construction of 100,000-ton, 349
"Horomya", 95
Large Oil, "George F. Getty", 545
Oil, "Caltex Edinburgh", Scott's Shipbuilding and Engineering Co., Ltd., (Plate 10, 11.1.57)
Oil, "San Felipe", Smith's Dock Co., Ltd., (Plate 10, 11.1.57)
Oil, "Solfonn", 95
Oil, "Spyros Niarchos", Vickers-Armstrongs (Shipbuilders) Ltd., (Plate 10, 11.1.57) ; Film, (221)
Oil, "Vivien Louise", 95
Oil, "Vola", 95
Tankers, Atomic-Powered, (Leading Article, 432)
World's, Laurence Dunn, (Review, 529)
Tap-Changer, On-Load, Metropolitan-Vickers Electrical Co., Ltd., 534
Tape Standardising Base, Changes in a 50m Mural, L. O. C. Johnson, 632
Target Aircraft, "Jindivik", Fairey Aviation Co., Ltd., 922
Defence Interceptor Aircraft, Sud-Est "Durandal", 16
Plane, Remote Controlled, "CT-20", 922
Tariff, Bulk Supply, Central Electricity Authority, 525
Taxation and Industry, 959
Vehicle, and New Roads, 438
Teaching Device for Royal Navy, 413
Production Engineering in Universities, 189
Tear and Wear, James Johnson, 605

Technical Articles, Premiums, (681)
Aspects of Sound, E. G. Richardson, (Review, 683)
Authorship, (892)
College Libraries, 593
Colleges, Hostels at, 420
Developments in Electricity Supply, 9
Education, 788
Education, Developing, Sir Harold Roxbee Cox, 433
Progress and Industry, 867 ; (Leading Article, 819)
Progress in Steam Turbine Design, L. S. Robson, 978
Technique des Asservissements, Theorie et, J. C. Gille, M. Pelegrin and P. Decauline, (Review, 368)
Transonic Tunnel Testing, 69
Techniques of Excavation, Modern, H. L. Nichols, (Review, 955)
in Work Study, Work Sampling, J. A. C. Williams, 245
"Technology", A New Journal, (375)
Advances in Steel, in 1955, (Report, 601)
and Science, National Lending Library, D. J. Urquhart, 90 ; Gordon H. Wright, (Letter, 174)
and Science, Robert Blair Fellowships, (156)
Training, Reactor, 745
and World Structure, 698
Technological Education, Higher, Report, 173
History, Studying, (Leading Article, 896)
Humanism, Sir Eric Ashby, 868
Technologist and the University, 827
Tee Slot Design, Contribution Towards Rational, H. Fessler, 904
Teeth, Permissible Backlash Between, W. A. Tuplin, 951
Telephone Cable, Transatlantic, 59 ; (Leading Article, 159) ; Plans for Second, 593 ; Symposium, 135, 176
-Radio, Multi-Channel Link for Portugal, Automatic Telephone and Electric Co., Ltd., 149
Translator, Siemens-Ediswan Research Laboratories, 494
Telerecording Equipment, 16mm, with Fast Pull-Down Mechanism, Marconi's Wireless Telegraph Co., Ltd., 108
Telescopes, Large, R.v.d. R. Woolley, 828
Television Equipment, "Roving Eye", 412
and Radio, Transistors in, Milton S. Kiver, (Review, 408)
Telewriter, Facsimile, Siemens und Halske Aktiengesellschaft, 771
Telford Exhibition, (854)
Temperature Distribution, Radial, in an Annular Coolant Passage, Henry Barrow, 713
Low, Welding, Eutectic Welding Alloys Co., Ltd., 188
Temperatures, Elevated, Mechanical Properties of Steels, (B.S.I., 837)
High, Tensile Properties of Copper-Nickel Alloys, 988
Tempered and Oil-Hardened Steel Wire, (B.S.I., 110)
Temporary Transfer of Workers, 770
Tenders, Sleet, on London Transport, 226
Two Fire-Fighting, Merryweather and Sons, Ltd., 498
Tennessee Valley Authority, Progress, 465, 505, 546
Tensile Properties of Copper-Nickel Alloys at High Temperatures, 988
Testing of Metals, (B.S.I., 580)
Tercentenary Exhibition, Huyghens, T. R. Robinson, 87
Terminology in Gearing, A. M. Gunner, (Letters, 758, 836) ; Allan H. Candee, (Letter, 484); F. E. Lindsay, (Letter, 836); W. A. Tuplin, (Letter, 569)
of Internal Defects in Castings, (B.S.I., 649)
Test Beds, Diesel Engine, C.A.V. Ltd., (Plate 6, 11.1.57)
Indicators, Dial, (B.S.I., 444)
Set, Resistivity, Portable Metal Sorter, Solartron Electronic Group Ltd., 188
Stand, High-Head Turbine, American, 153
Transformer, Foster Transformers Ltd., 56
Vehicle, Recoverable, Bristol "Bobbin", 497
Vehicle, Suspension, E.R.A., (Plate 6, 11.1.57)
Tester, Phase-earth Loop Impedance, Ferranti Ltd., 572
Testing and Analysing Coal and Coke, (B.S.I., 955)
Flowmeters, Elliott Brothers (London) Ltd., 227
Helicopter Engine, Alvis Ltd., 264
Instrument, Angle, Carl Zeiss, 811
Machine, Hob, W. Ferd. Klingelnberg Soehne, 385
Machine for Concrete, Compression, P. J. F. Wright, 639
Machines of Unit Construction, W. and T. Avery Ltd., 147
Manual, Soil, (547)
of Metals, Tensile, (B.S.I., 580)
Mission, Materials, to the U.S.A., 848
Plastics, Methods, (B.S.I., 723)
Station for Tall Structures, Stewarts and Lloyds Ltd., (Plate 6, 11.1.57)
Technique, Transonic Tunnel, 69
Techniques, Tractor, T. C. D. Manby, 593
Welded Pipes, Television Equipment for, Phoenix Rheinrohr A.G., 772
Vulcanised Rubber, (B.S.I., 837)
Tests on Leaded Steels, Impact, 647
Nuclear Weapon, Decca Navigator Co., Ltd., (236)
Prot Fatigue, on High-Strength Steel, 989
Saunders-Roe "Princess" Flying Boat G-ALUN Air and Water, (Report, 894)
for Use in the Approval of Welders, (B.S.I., 649)
Text Book, Motor Vehicle Mechanic's, F. K. Sully, (Review, 528)
Textile Industry, Fluid Bed Technique, 651
Processing Equipment, 461
Processing Technique, English Glass Co., Ltd., (588)
Thailand, Construction of the Chainat Barrage, 448
Thames between Dartford and Purfleet, Tunnel Under, 531
Estuary Investigations, (Leading Article, 895)
Estuary, Pollution, 631
Estuary, Silting, 859
Theoretical Physics, Relaxation Methods, Sir Richard Southwell, (Review, 255)
Theorie et Technique des Asservissements, J. C. Gille, M. Pelegrin and P. Decauline, (Review, 368)
Theory of Electrical Machines, General, Bernard Adkins, (Review, 609)
and Practice in Automation, E. M. Hughes, (Review, 174)
of Suspension Bridges, Sir Alfred Pugsley, (Review, 447)
of Vibrations for Engineers, E. B. Cole, (Review, 447)
Thermal Conductivity, Methods of Determining, and Heat Insulating Terms, (B.S.I., 269)
Insulation by Compulsion, (Leading Article, 472)
Insulation Factory, Dick's Asbestos and Insulating Co., Ltd., 223
Insulation of Factories, George T. Noble, (Letter, 568)
Insulation of Industrial Buildings, 433
Thermodynamic Processes, Unsteady, A. P. Hatton, 949
Thermometers, (B.S.I., 955)
Thickness Gauge, Dawe Instruments Ltd., 494
Thin-Walled Bearings for Heavy Engineering Applications, Glacier Metal Co., Ltd., (468)
Thorpe Marsh, Proposed Coal-Burning Power Station, 809
Threads of B.S.P. Sizes, Fastening, (B.S.I., 580)
Parallel Screw, of Whitworth Form, (B.S.I., 609)
Practice, Unification of Screw, D. G. Sopwith and J. E. Field, 793
Thrust Boring Method of Culvert Construction, Costain John Brown Ltd., 881
Tiber, Grillo Bridge, 582
Tie Wires, Steel Lock for, Cuno Schuckhaus K.G., 385
Tiers, Reactor, Cast-in-Concrete, British Thomson-Houston Co., Ltd., 56
Tilbury "A" Power Station, (Plate 8, 4.1.57)
Docks, Berth, 973
Tilting Turning Rolls for Welding Cylindrical Work, Donald Ross and Partners Ltd., 110
Timber Industry in Europe, (Report, 932)
Preservation, (Review, 953)
Research, 935
Uses of, (588)
Time of a Geared System, Start-Stop, J. R. Ellis, 902
Lost Through Disputes, 883
Tin-Aluminium, Bearings, (402)
Tip Pressure Jets, Rotor, Fairey Aviation Co., Ltd., 686
Tools, Renewable Carbide, Wickman Ltd., 458
Titanium in the Aircraft Industry, Imperial Chemical Industries Ltd., 295
and Titanium Alloys, Oxygen Cutting, G. Coates, 132
Toggle Press, F. J. Edwards Ltd., (930)
Toll Roads in the U.S.A., H. J. H. Starks, 288, 323
Tool-kit, Mathematical, for Engineers, H. A. Webb and D. G. Ashwell, (Review, 723)
for High Tensile Metals, Carbide, Production Tool Alloy Co., Ltd., 539
Tools, A Man and His, 404
and Appliances, Workshop, (Patents, 197, 509, 665, 931, 969, 1005)
Ceramic Cutting, Soderfors Bruk, 888
Machine, Electrical Equipment of, (B.S.I., 723)
Machine, (Patents, 237, 277, 469, 549, 589, 1006)
Portable Electric, (B.S.I., 837)
Renewable Carbide Tip, Wickman Ltd., 458
Steel-Cutting Carbide, (196); Wickman Ltd., 109
Tooth, Let's Forget the Cycloid, F. E. Lindsay, (Letter, 648) ; W. A. Tuplin, (Letter, 722)
Top Management, 733
Torque Converter Roller, Eddison Plant Ltd., (757)
Torsional Vibration Pick-up, Southern Instruments Ltd., 494
Tower Clock at Malmesbury Abbey Church, New, T. R. Robinson, 124
Cranes, Power-Driven Rail-Mounted, (B.S.I., 723)
Towers, Masts and Pylons, Design of, (Report 339)
Tracing Attachment, Hydraulic Contour, for Turret Lathes, Warner and Swasey Co., 351
Track Circuiting Equipment for British Main Line Electrification, Westinghouse Brake and Signal Co., Ltd., 460
Recording Trolley for British Railways, 845
Traction, Diesel Railway, (Leading Article, 472) ; E. C. Poultney, (Letter, 568)
Engine Railway Locomotives, R. A. S. Abbott, 165, 205 ; Geoffrey W. King, (Letter, 300) ; A. L. Lambert, (Letter, 682) ; Stephen B. Fletcher, (Letter, 758)
Rope, Steam Culture, 1857, 513
Tractor, Euclid "Twin Power Crawler", (Plate 9, 11.1.57)
Mounted Air Compressor, B.E.N. Patents Ltd., (38)
Mounted Combine Harvester, Massey-Harris-Ferguson Ltd., (Plate 8, 11.1.57)
Testing Techniques, T. C. D. Manby, 593
and Trailer Vehicles for Opencast Coal Hauling, Costain Mining Ltd., (Plate 9, 11.1.57)
Water, for Belgian Congo, 273
Tractors and Cars, Producer Gas Plant for, Aktiebolaget Volvo, 386
Trade Agreement, Anglo-Polish, 32
by Air, Oversea, 916
Anglo-German, 420
Anglo-Soviet, 620, 996
Area, European Free, (Leading Article, 239)
British Overseas, 150
with China, 883
Disputes, On, 127
European Free, (Leading Article, 668)
Export, Monthly Figures, 229
Fair, German Handicrafts and, 735
Fair at Helsinki, British, 733
Fairs, Continental, 229
Industry and European Free, 308
Integration of European, 462
Names, Computer Production, 503
Overseas, 32, 111, 270, 346, 500, 620, 695, 810, 848, 959, 996
Practices Act, 1956, Restrictive, 32
with South Africa, 500
Unions and Management, 581
Trades Directory, Electrical, 1957, (Review, 799)
Fair, Lille International, 272
Traffic Locomotive, Standard Class 5 Mixed, (Plate 7, 4.1.57)
Receipts, 270
"What Are We To Do With Our Street?", 1857, 83
Trailer and Tractor Vehicles for Opencast Coal Hauling, Costain Mining Ltd., (Plate 9, 11.1.57)
Train Control, Automatic, (930)
Service, Melbourne-Sydney Passenger, 250
Trainer, Fouga Jet, 884
Training Centre, Railway Civil Engineer's, (588)
Centre and Research Buildings, 707
Courses, Vacation, Shell Petroleum Co., Ltd., (428)
and Education, 581
and Education of Naval Architects and Marine Engineers, 253
Electrical Engineering, I.E.E. Report, 161
for Graduates, Works, (Leading Article, 199)
of Naval Architects, (Leading Article, 280)
Practical, of Mechanical Engineers, 395
Reactor Technology, 745
Scheme, Apprentice, F. Perkins Ltd., (148)
School, Railway Apprentice, London Midland Region, (559)
Trains Between Paris and Zurich, Autorail Express, 869
Diesel-Electric, for the Southern Region, 732
Introduction of Gas for Railway, 1857, 821
Main Line Diesel-Electric, Metropolitan-Cammell Carriage and Wagon Co., Ltd., 521
Multiple-Unit Electric, on London Midland Region, 844
Six-axle Twin-car Diesel, Linke-Hofmann-Busch, 926
Transatlantic Telephone Cable, 59 ; (Leading Article, 159) ; Plans for Second, 593 ; Symposium, 135, 176
Transducers, Pressure, O.N.E.R.A., 925
Transfer Laboratory, Heat, Babcock and Wilcox Ltd., (Plate 3, 11.1.57)
Laboratory, Heat, G.E.C.-Simon-Carves Atomic Energy Group, (Plate 3, 11.1.57)
of Workers, Temporary, 770
Transformations in Metals, Mechanism of Phase, (Review, 955)
Transformer Cooler, Forced-Oil Air-Blast, British Thomson-Houston Co., Ltd., 847
Cooling, Synthetic Fluids for, P. D. Wilmot and N. G. H. Thomas, 410, 451
Flameproof, for Coal Mines, ACEC, 192
400kV Power, British Thomson-Houston Co., Ltd., 845
Large Mobile, A.E.G., 622
Single-Phase, 15kVA Pole-Mounted, Partridge Wilson and Co., Ltd., 570
Transformers, Power, in Service, Mechanical Strength of, E. T. Norris, 331
Power, Standard Telephones and Cables Ltd., 572
Test, Foster Transformers Ltd., 56
Trans-Iranian Pipeline, 513
Transistor Manufacture, Mullard Ltd., 909
Meter, Association des Ouvriers en Instruments de Precision, 924
Transistors in Radio and Television, Milton S. Kiver, (Review, 408)
in Watches, 735
Translator, Telephone, Siemens-Ediswan Research Laboratories, 494
Transmission Gear Heat-Treatment Installation, David Brown Industries Ltd., 652
Hydraulic, Kieler Howaldtswerke A.G., 999
Overhead Power, Aluminium Conductors (B.S.I., 269)
Power, (Patents, 39, 79, 157, 197, 391, 589, 627, 703, 741, 818, 893)
Transmission, Synchromesh, David Brown Automobile Division, (15)
System, C.E.A. 275kV, Effect of Nuclear Power on, 721
Transmissions, Coach, Leyland "Tiger Cub", (276)
Hydraulic, Hydromatic G.m.b.H., 812
Transonic Tunnel Testing Technique, 69
Transport Aircraft, Jet, "SE210 Caravelle", 922
Aircraft, Lockheed C-130 "Hercules", 922
Aircraft, Military, Hurel-Dubois, 885
Aircraft, Tactical, De Havilland Aircraft of Canada Ltd., 461
Facilities in Switzerland, Mountain, 464
Goods, Light Alloy Containers, Tracons Ltd., (437)
Road, (Patents, 429, 469, 969)
Transporter Aircraft, Breguet 765 "Deux Ponts", 884
Transporters, (Patent, 817)
and Conveyors, (Patents, 429, 931)
Travel, Air, Film, (702)
Exhibition, Railway, (968)
in London, 601
Travelling Crane, Fast, K. and L. Steelfounders and Engineers Ltd., 808
Wave Tubes as U.H.F. Amplifiers, English Electric Co., Ltd., 267
Trawler "Pioner", Brooke Marine Ltd., (Plate 11, 11.1.57)
Treatment for Masonry, Water-Repelling, Evode Ltd., (468)
Plant at the L.C.C.'s Northern Outfall, Construction of Secondary, 610
Works, Deephams, Sewage, Edmonton, (Plate 1, 11.1.57)
Tree Growth, Computer Microscope for Gauging, 423
Trends in Canadian Railway Equipment, 673
Export, 189
Trial Trips and Launches, 80, 118, 158, 198, 430, 470, 549, 590, 628, 666, 704, 742, 780, 818, 856, 894, 970
Trials on the "Lubumbashi", Further Sea, G. Aertssen, 602
on the Western Region, Heavy Express Locomotive, O. S. Nock, 560, 594 ; W. A. Tuplin, (Letters, 682, 836) ; E. C. Poultney, (Letter, 798) ; O. S. Nock, (Letter, 798)
Triple-draw High-speed Drawbench, Automatic, Head Wrightson Machine Co., Ltd., (Plate 4, 4.1.57)
Trips, Trial, and Launches, 80, 118, 158, 198, 430, 470, 549, 590, 628, 666, 704, 742, 780, 818, 856, 894, 970
Trolley, Track Recording, for British Railways, 845
Troopship "Nevasa", Barclay, Curle and Co., Ltd., 23
Tropospheric Scatter Link, Marconi's Wireless Telegraph Co., Ltd., 59
Truck, All-Wheel-Drive Diesel, Ford Motor Company, 385
Electric Fork, Rider Controlled, Lansing-Bagnall Ltd., (468)
Flameproof Electric Fork, Conveyancer Fork Trucks Ltd., 684
Fork Lift, Matling Ltd., 656
of Integral Construction, Mann Egerton and Co., Ltd., (Plate 3, 4.1.57)
Mandrel Lift, Maschinenfabrik Esslingen, 771
Trunk Road Improvement in Staffordshire, A.5, (25)
Tube, Ball and Rod Mill, Gear Failures, H. E. Rose, 522
and Pipe Couplings, (Patents, 665, 817, 970)
Straightening Machine, Th. Kieserling and Albrecht, 660
Tubeless Tyres, Repetitive Inflation, Weldall and Assembly Ltd., 539
Tubes and Bars, Steel, Talbot Steel Tube Co., Ltd., (993)
Cathode-Ray, and Electronic Valves, 346
Joint for Polythene, Mange Plastics Ltd., 653
Pipes and Conduits, (Patent, 893)
Tubing, Alloy, Heraeus Hanau, 811
in Aluminium, Welded, T. I. Aluminium Ltd., (Plate 4, 4.1.57)
Seam-Welded Aluminium, T. I. Aluminium Ltd., 268
Tubular Drill Mast Salzgitter Maschinen A.G., 811
Fluorescent Lamps, (B.S.I., 225)
Tug, Twin Screw, "Atherfield", John I. Thornycroft and Co., Ltd., (Plate 11, 11.1.57)
Twin Screw, "Otago", 96
Twin Screw, "Takoradi", 96
Tugs for the Navy, Diesel-Electric Paddle, G. W. Tripp, 486

TUNNELS

Blackwall Tunnel Improvement, 745
Channel Tunnel : Will It Ever Be Driven, Rolt Hammond, 717
Electrification of the Severn Tunnel Pumping Stations, 319
Progress of Potters Bar Railway Tunnel, 612
Road Tunnel Under Lower Fraser River, Vancouver, 48
Transonic Tunnel Testing Technique, 69
Tunnel Under the Thames between Dartford and Purfleet, 531
Tunnels, Supersonic Wind, Flow Direction Measurements, (Report, 19)
Tunnel, Aircraft Research Association, (Plate 6, 11.1.57) ; 55
Tunnels, Royal Aircraft Establishment, Bedford, 986
Turbine Blades, Gold-Coated Molybdenum for, (587)
Closed-Cycle Air, for Naval Use, W. Spillman, 995
Design Details, Napier "Gazelle" Gas, 690
Design, Steam, Technical Progress, L. S. Robson, 978
150MW Steam, M.A.N., 734
Industrial Gas, Standard Motor Co., Ltd., 406
Power Station, Gas, Venezuela, Ruston and Hornsby Ltd., 618
Relighting, 213
Test Stand, High-Head, American, 153
Water, for 1200kW Generator, Escher Wyss G.m.b.H., 734
Turbines, "Britannia" Aircraft, 593
Gas, Indirect-Fired, Donald L. Mordell, 210
Gas, in 1956, 26
Gas, (Patents, 117, 227, 509, 779)
Gas, Refractory Nozzle Blades for High-Temperature, 251
Gas and Steam, (Patent, 779)
Steam, (Patent, 197)
Turbo-Charger, Eberspacher, (Plate 5, 4.1.57)
Turbo-Generator, Dedication of Historic Steam, U.S., 349
Turbo-Generators, 200MW, for Willington "B" Power Station, Metropolitan-Vickers Electrical Co., Ltd., 173
Turbo-jet Engine, "Atar 9", S.N.E.C.M.A., 923
Turbo-prop, Bristol "Orion", (Plate 5, 4.1.57)
Turkey, Oil Refinery, (702)
Turning Tilting Rolls for Welding Cylindrical Work, Donald Ross and Partners Ltd., 110
"Turnkey" Contract, Taylor Woodrow Ltd., (892)
Turret Lathes, Hydraulic Contour Tracing Attachment, Warner and Swasey Co., 351
Tuscany, Vagli di Sotto, Bridge, 582
TVA Costs and Prices, George L. Schlaepfer, (Letter, 722)
Twin Screw Tug "Otago", 96
Screw Tug "Takoradi", 96
Tyres, Giant Earthmover, Dunlop Rubber Company, (664)
Tubeless, Repetitive Inflation, Weldall and Assembly Ltd., 539

U

Uganda Electricity Board Programme, (588)
Ultimate Strength Design in Reinforced Concrete, 110
Ultrasonic Cleaning and Degreasing Machine, Low-Frequency, Mullard Ltd., 724
Flaw Detection Equipment for Large Plates, James Booth and Co., Ltd., 692
Generator for Drilling and Soldering Applications, Mullard Ltd., 228
Inspection, Automatic, Kelvin and Hughes Ltd., 455

Ultra-Thin Strip, Twenty-High Cluster Mill for Rolling, Loma Machine Manufacturing Co., 351
Unconventional Aircraft, (78)
Underground Boreholes, Inclinometers for Use in Long, 655
Undertakings of the World, Electricity, (Review, 101)
Unemployment and Employment, 111, 308, 420, 581, 770, 959
and Short Time Working, 189
Unification of Screw Thread Practice, D. G. Sopwith and J. E. Field, 793
Uniform Sheet Wax, Kindt-Collins Co., 882
U.S.A., Atomic Energy Commission, Tenth Anniversary, 310
Atomic Energy Developments, (Plate 15, 4.1.57)
Materials Testing Mission, 848
Production of Stepped Aluminium Alloy Extrusions, 114
Toll Roads, H. J. H. Starks, 288, 323
Universal Grinder, F. Ili Lizzini, 925
Swiven Vice or Table, Trend Industrial Equipment Ltd., 985
Universities, British, Scientific Research, 1955-56, (Review, 215)
Teaching Production Engineering, 189
University of Chicago, Enrico Fermi Professorship, 815
of Edinburgh, Post-Graduate School of Applied Dynamics, 957
Interchange, European, 959
Liege, Van de Graaff Accelerator, 152
Research Computer Laboratory, Washington, (351)
Scholarship, Open, Lockheed Hydraulic Brake Co., Ltd., (236)
and the Technologist, 827
Unpainted Aluminium Alloy Ship Superstructure, Davie Shipbuilding Ltd., 307
Unstable Rupturing of a Wide Plate, Conditions for, G. M. Boyd, 644
Unsteady Thermodynamic Processes, A.P. Hatton, 949
Untersuchungen uber die Driedimensionale Potentialstromung durch axiale Schaufelgitter, (Report, 970)
Unusual Aerodynes, 846
Upper Atmosphere, Scientific Investigation, 342
Urban Highway Maintenance, W. J. Hiscock, 43
Uses of Rubber, Engineering, A. T. McPherson and Alexander Klemin, (Review, 683)
of Timber, (588)
Using and Refining Nickel, L. B. Pfeil, 720
U.S.S.R. and Britain, Coal in, (Leading Article, 858)
Utilisation des Compteurs de Geiger-Muller a L'etude de Variations de Tecture de Laminage Suivant la Temperature de Deformation, (Report, 302)
of Patents in Germany, 584
Utility Car, Problems of the Small, D. Giacosa, 616
Utrecht, Welding Exhibition, 113

V

Vacation Training Courses, Shell Petroleum Co., Ltd., (428)
Vacuum Furnace, High-Temperature, General Electric Co., Ltd., 655
Impregnator for the Pakistan Railways, Large, 701
Spectrograph, Laboratories de Bellevue, 924
Vagli di Sotto Bridge, Tuscany, 582
Valve, Pinch, Dosapro, 190
Valves, Electronic, and Cathode-Ray Tubes, 346
Large Capacity Solenoid-Operated, Teddington Industrial Equipment Ltd., (532)
(Patents, 277, 665, 969)
Vancouver Island—British Columbia 138kV Submarine Power Cable, T. Ingledow, R. M. Fairfield, E. L. Davey, K. S. Brazier and J. N. Gibson, 678
Road Tunnel Under Lower Fraser River, 48
Van de Graaff Accelerator for Liege University, 152
Generator, 58
Particle Accelerator, 58
Variable Speed Drive, Lancashire Dynamo Electronic Products Ltd., 726
Varnishes, Organic Baking Impregnating, for Electrical Purposes, (B.S.I., 369)
V-Belt Drives, British Tyre and Rubber Co., Ltd., (993)
Vee Belts, British Tyre and Rubber Co., Ltd., (930)
Vee Block, Magnetic, William Urquhart, (968)
Vegetable-Tanned Leather Belting, (B.S.I., 876)
Vehicle Manufacture, Motor, (508)
Recoverable Test, Bristol "Bobbin", 497
Regulations, Motor, (968)
Suspension Test, E.R.A., (Plate 6, 11.1.57)
Taxation and New Roads, 438
Vehicles for Opencast Coal Hauling, Tractor and Trailer, Costain Mining Ltd., (Plate 9, 11.1.57)
Road, Integral Construction for, (Plate 3, 4.1.57)
Venezuela, Research Reactor, 75
Venezuelan Destroyer "Aragua", 92
Destroyer "Juan Jose Flores", 92
Ventilated Squirrel-Cage Motors with Class-E Insulation, English Electric Co., Ltd., 306
Ventilating and Heating Industry, Year Book, (Review, 139)
Ventilation and Heating Congress, 923
Vernier Bevel Protractor, MZB Messzeug G.m.b.H., 273
Vertical Steam Engine, Mannesmann-Meer A.G., 811
Take-off Aircraft, "Flying Atar" C-400 P-2, 922
Viaduct, Centenary of Crumlin, 873
Vibration Analysis Tables, (Report, 302)
Compaction of Concrete by, J. M. Plowman, 830
Monitor, Philips Electrical Ltd., 766
Mounting, Anti, 494
Pick-up, Torsional, Southern Instruments Ltd., 494
Pick-ups, Electrodynamic Calibration, 586
Vibrations for Engineers, Theory of, E. B. Cole, (Review, 447)
Vice, Cam-Operated, Associated Steels and Tools Co., Ltd., 845
or Table, Universal Swivel, Trend Industrial Equipment Ltd., 985
Victorian Apprenticeship, H. E. Wimperis, 134
Volta Bridge, 185
River Project, 20
River, Steel Arch across, (Plate 2, 4.1.57)
Voltage Stabiliser, Philips Electrical Ltd., 571
Vortex Air Cleaner, Investigation, T. C. Daniels, 358
Classifier, Air, for Dry Powders, Sharples Centrifuges Ltd., 378
Voyage Data, R. E. Clements, (173)
Vulcanised Rubber, Testing, (B.S.I., 837)

W

Wadding Mill at Aylesford, Cellulose, Kimberley-Clark Corporation, 875
Mill, Opening, Reed Paper Group, 669
Wage Claims, 111
Dispute, Shipbuilding and Engineering, 500
Negotiations and Productivity, (Leading Article, 511)
Rates, Changes in, 32, 229, 381
Wages, Engineering, (Leading Articles, 705, 820)
Engineering and Shipbuilding, 399, 542, 733, 770, 848
and Hours, (Leading Article, 933)
Railway, 189, 500, 542, 581
and Salaries in Switzerland, 545
Shipbuilding, 916
Wagon Haulage Equipment, Railway, 307
Wagons, German Goods, 384
Walking Dragline, 12 cubic yard, Ransomes and Rapier Ltd., (Plate 9, 11.1.57)
Walls, Curtain, Stud Welding Fasteners, 274
Wallsend, Dry Dock, 801
War Department, Application of Machinery, 1857, 161
Warship Building, Structural Steels for, with Some Notes on Brittle Fracture, Sir Victor Shepheard, 526
Wartime Excavating Machine, 395
Washer Filter, Wet, Keith Blackman Ltd., 684
Washington University Research Computer Laboratory, (351)
Watches and their Repair, Complicated, Donald De Carle, (Review, 907)
Transistors in, 735
Water Atomisation by Spinning Discs, J. R. Pattison and J. D. Aldridge, 514
Cooled Rectifiers, Brown, Boveri et Cie, 771
Heating Systems, Forced Circulation in Hot, (Report, 856)
Hot, Central Heating by Low-Pressure, (Code, 93)
Power, Canadian, 161
Power Development, Scottish, 367
Power, Highland, North of Scotland Hydro-Electric Board, 46
Power, Russian, 849 ; (Leading Article, 820)
Power Schemes in 1956, American, 35, 76
Reactor, Experimental Boiling, at the Argonne National Laboratory, 623, 661, 699
Repelling Treatment for Masonry, Evode Ltd., (468)
Separation Process, Heavy, 503

WATER SUPPLY

Abatement of Water Pollution, 622
Dee Water Supply Scheme, 47
Experiments to Reduce Evaporation Loss from Reservoirs, (468)
Garrison Dam and Reservoir, 76
Geesthacht Pumped Storage Scheme, 543
Hull Water Supply, 47
Pollution in the Thames Estuary, 631
Portable Water Purifying Plant, Permutit Co., Ltd., (664)
Progress of the Metropolitan Water Board's New Works During 1956, 186
Projected Water Development in the Union of South Africa, 383
Surface Water Yearbook of Great Britain, 1953-54, (Review, 249) ; 1954-55, (Review, 870)
Water Engineer's Handbook, 1957, 995

Water Tractor for Belgian Congo, 273
Turbine for 1200kW Generator, Escher Wyss G.m.b.H., 734
Waterproofing, Reinforcing Fabric for, Fothergill and Harvey (Sales) Ltd., (854)
Waveform Generator, Low-Frequency, Servomex Controls Ltd., 767
Wavelength Determination Apparatus, Baird Associates, 115
Wax Cores, Soluble, for Investment Casting, Firth Vickers Stainless Steels Ltd., 578
Uniform Sheet, Kindt-Collins Co., 882
Weapon, Northrop SM62 "Snark" Offensive Pilotless, 922
Tests, Nuclear, Decca Navigator Co., Ltd., (236)
Wear and Tear, James Johnson, 605
Weaving Industry, Australian Wire, 382
Week, Forty-Hour, Confederation of Shipbuilding and Engineering Unions, 959
Weight Transfer on B-B Electric Locomotives, Consideration, E. H. Croft, 172

WELDING

Arc-Welding Costs, (Report, 970)
Automatic Feeding Equipment for Nut Welding Machine, Rhoden Partners Ltd., 767
Five-station Welding Plant, Briggs Motor Bodies, (Plate 4, 4.1.57)
Flash Welder, Asea Electric Ltd., 534
Band Saw Butt Welder, Elektro-Apparate-Bau G.m.b.H., 851
Electric Welding Plant and Electrode Factory, Lincoln Electric Co., Ltd., 757
Engineering, Marine Welding and Nuclear Energy Exhibition, (156)
Exhibition at Utrecht, 113
Gas Welding of Wrought Aluminium, (B.S.I., 876)
Handbook for Welding Design, (Review, 723)
High-Frequency Injector for Arc Welding, Metropolitan-Vickers Electrical Co., Ltd., 146
Low Temperature Welding, Eutectic Welding Alloys Co., Ltd., 188
Seam-Welded Aluminium Tubing, T.I. Aluminium Ltd., 268
Stud Welding Fasteners for Curtain Walls, 274
Television Equipment for Testing Welded Pipes, Phoenix Rheinrohr A.G., 772
Tests for Use in the Approval of Welders, (B.S.I., 649)
Tilting Turning Rolls for Welding Cylindrical Work, Donald Ross and Partners Ltd., 110
Use and Welding of Aluminium in Shipbuilding, (Review, 485)
Welded Aluminium Deep Tank Hatch Cover, Head Wrightson Aluminium Ltd., 379
Tubing in Aluminium, T.I. Aluminium Ltd., (Plate 4, 4.1.57)
Welding at Calder Hall, Gordon Brown, (Letter, 300)
Exhibition, Essen, 504

Werften, Handbuch der, 1956, (Review, 409)
West Germany, Consumption of Ferrous Scrap, 348
Germany, 15MW Nuclear Power Station, Mitchell Engineering Ltd., 575
Western Europe, Future Demand for Oil, 112
Europe, Mobility of Labour, 191
Wet Washer Filter, Keith Blackman Ltd., 684
Wharf, Apapa, Lagos, (664)
"What Are We To Do With Our Street Traffic"? 1857, 83
Wheel Dressers, Grinding, Danite Hard Metals Ltd., (31)
Solid, and Disc Mill, Scholemann A.G., 347
Wheels, Grinding, Internal Coolant, Feed, 423
Solid Rolled Steel Railway, (B.S.I., 67)
White Paper, Defence, 1957, (Leading Article, 552)
Whitworth Form, Parallel Screw Threads, (B.S.I., 609)
Register, H. H. Johnson and F. T. Barwell, (Review, 649)
Whyalla, South Australia, Salt Production, 382
Wide-Band Radio Communications Equipment, Exhibition, 266
Wide Plate, Conditions for Unstable Rupturing, G. M. Boyd, 644
Will It Ever Be Driven, The Channel Tunnel, Rolt Hammond, 717
Williamson Diamond Mines, Power Station, 373
Willington "B" Power Station, 200MW Turbo-Generators, Metropolitan-Vickers Electrical Co., Ltd., 173
Winch for Scaffolding Cradles and Bosuns' Chairs, Tirfor Ltd., 769
Wind Power, Generation of Electricity by, (Report, 1006)
Tunnel, Aircraft Research Association, (Plate 6, 11.1.57) ; 55
Tunnels, Royal Aircraft Establishment, Bedford, 986
Tunnels, Supersonic, Flow Direction Measurements, (Report, 19)
Winder, D. C., with Control Exciter at Silverwood Colliery, General Electric Co., Ltd., 182
Friction, for Coal Mine, Gutehoffnungshutte Sterkrade A.G., 771
3000-h.p. Skip, at Cwm Colliery, 55
Winders, A.C., at Manvers Main Colliery, General Electric Co., Ltd., 958
1,200-h.p. Sinking, Automatic Control for, at Lea Hall Colliery, 55
Windings, Direct-Water-Cooled, for Large Alternators, General Electric Co., Ltd., 878
Wings, Cambered Supersonic, (664)
Swept, Subsonic Flow Past, (Report, 19)
Winter Concreting, Rilem Symposium on, (Review, 955)
Wire, Oil-Hardened and Tempered Steel, (B.S.I., 110)
for Prestressed Concrete, British Ropes Ltd., (930)
Take-up Machine, Fawcett-Finney Ltd., 684
Weaving Industry, Australian, 382

WIRELESS

Apparatus for Wavelength Determination, Baird Associates, 115
Automatic Position Plotting, Standard Telephones and Cables Ltd., 344
B.B.C. Handbook, 1957 ; (Review, 215)
Dectra Progress, Decca Navigator Co., Ltd., (664)
Exhibition of Wide-Band Radio Communications Equipment, 266
Fixed Capacitors : Radio and Electronic Components, G. W. A. Dummer, (Review, 138)
Ground Radar Calibration, (797)
Microwave Course Beacon, 378
Multi-Channel Radio-Telephone Link for Portugal, Automatic Telephone and Electric Co., Ltd., 149
Printed Circuits, Technograph Electronic Products Ltd., 684
"Roving Eye" Television Equipment, 412
Seeing by Radio, (Leading Article, 592)
Solid State Oscillator for Microwave Frequencies, Bell Telephone Laboratories, 389
Telerecording Equipment, 16mm, with Fast Pull-Down Mechanism, Marconi's Wireless Telegraph Co., Ltd., 108
Television Equipment for Testing Welded Pipes, Phoenix Rheinrohr A.G., 772
Transistors in Radio and Television, Milton S. Kiver, (Review, 408)
Travelling-Wave Tubes as U.H.F. Amplifiers, English Electric Co., Ltd., 267
Tropospheric Scatter Link, Marconi's Wireless Telegraph Co., Ltd., 59

Wires, Ties, Steel Lock for, Cuno Schuckhaus K.G., 385
Women in Industry, 996
Wood Engravings, (Leading Article, 82)
Woolwich, Experiments at, 1857, 553
Reduction of Hands, 1857, 241
Work on Bradwell Nuclear Power Station, Inauguration, 121
Cylindrical, Tilting Turning Rolls for Welding, Donald Ross and Partners Ltd., 110
Heavy Precast Concrete Structural, 372
in Industry, Gas at, 107
Sampling Techniques in Work Study, J. A. C. Williams, 245
Small Cylindrical, Precision Comparator for, J. C. Evans and W. F. Atkins, 716
Study Group, Leicestershire, (532)
and Workers, International Congress for the Promotion, 923
Workers, Protecting X-Ray, 996
Research, and Graduate Students, D.S.I.R. Grants, 121
Temporary Transfer, 770
Working to a Programme, (Leading Article, 393)
Short Time, and Unemployment, 189
Stresses for Structural Softwoods, (Report, 339)
Workington, Iron and Steel Works, Workington Iron and Steel Co., 804
Workmanship, Diligent, (Leading Article, 240)
Workmen, Dearth of Skilled, 1857, 201
Skilled, 1857, 357
Works, Cleveland Iron and Steel, Dorman, Long and Co., Ltd., (Plate 5, 11.1.57)
Coking Plant in Middlesbrough, Steel, Dorman Long (Steel) Ltd., 727
Deephams Sewage Treatment, Edmonton, (Plate 1, 11.1.57)
Eastern Region Modernisation, (458)
Ebbw Vale Steel, Richard Thomas and Baldwins Ltd., (Plate 5, 11.1.57)
Extensions to a Stockton, Ashmore Benson Pease and Co., 880
of the Metropolitan Water Board During 1956, Progress, 186
Modifications in a Precast Concrete, Modular Concrete Co., 496
in Qatar, Proposal for a Cement, (452)
Rourkela Steel, 347
in South Africa, Railway, 919
Training for Graduates, (Leading Article, 199)
at Workington, Iron and Steel, Workington Iron and Steel, Co., 804
Workshop Projector, Precision, Optical Measuring Tools Ltd., 377
Tools and Appliances, (Patents, 197, 509, 665, 931, 969, 1005
Mobile, for Servicing Power Station Equipment, British Thomson-Houston Co., Ltd., 580
World Aviation, Interavia ABC Directory, (Review, 799)
Electricity Undertakings, (Review, 101)
Energy, The Practical Application, Power Production, Hans Thirring, (Review, 139)
Iron Ore Reserves, 270
Oil Supplies, (Leading Article, 120)
Old, Notes on Prehistoric and Early Iron, H. H. Coghlan, (Review, 101)
Power Conference, 960 ; Sectional Meeting, (38) ; Eleventh Sectional Meeting, 386
Railways, 1956-57, (Review, 301)
Structure and Technology, 698
World's Tankers, Laurence Dunn, (Review, 529)
Wreck Returns, Lloyd's Register of Shipping, (236), (564)
Wrought Aluminium, Gas Welding, (B.S.I., 876)

X

X-Ray Processing Equipment, Kodak Ltd., 461
Studies of Stresses in Metals, 154
Workers, Protecting, 996

Y

Year Book of Great Britain, Surface Water, 1953-54, (Review, 249) ; 1954-55, (Review, 870)
Book of the Heating and Ventilating Industry, (Review, 139)
Book, Kempe's Engineers, 1957, (Review, 101)
Book, Physical Society, 1956, (99)
International Geophysical, 973
Years, The First One Hundred and Fifty, John Wiley and Sons Inc., (Review, 723)
Yield Strength of Steels, Dynamic, 482
Yorkshire, Natural Gas, Imperial Chemical Industries Ltd., (185)
Youthful Importance, Two Events, (Leading Article, 552)

Z

Zambesi and Kariba, 383
Zuider Zee Reclamation, 997
Zurich and Paris, Autorail Express Trains, 869